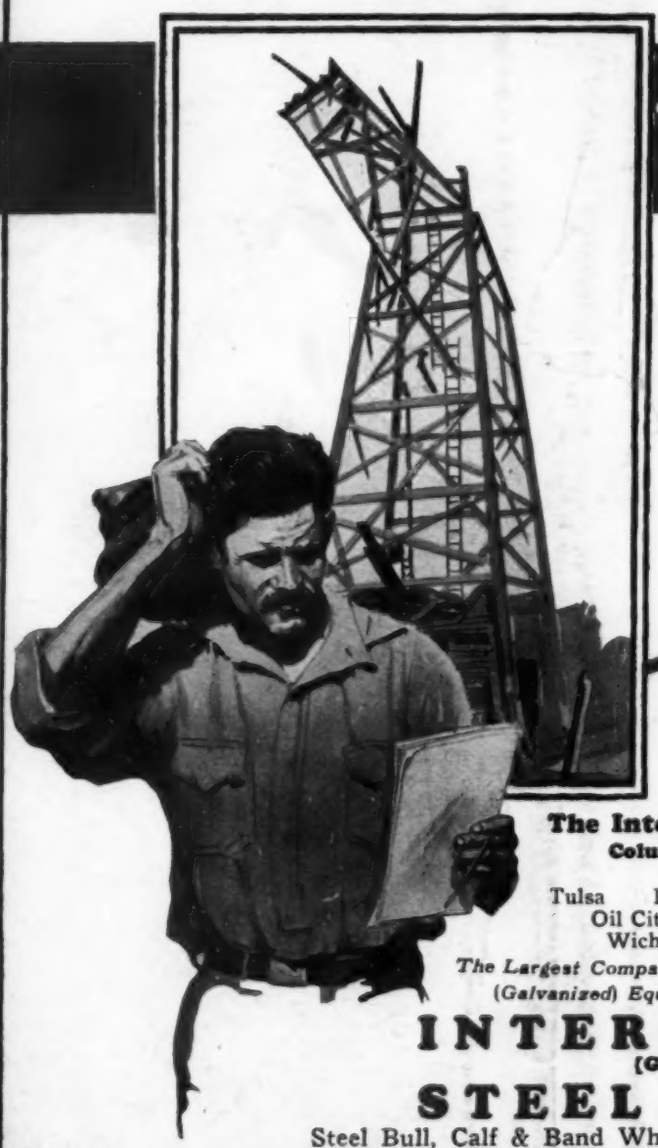
A Journal for
Oil and Gas Producers and Field Men

The OIL WEEKLY

May 15, 1925 — 10 Cents A Copy



A Simple Problem In Arithmetic

If

The average producing well is good for twelve (12) years and the average wooden derrick in most districts is good for from one (1) to three (3) years:

How much do you save in using a wooden rig when INTERNATIONAL "IDECO" Derricks of Galvanized Structural Steel (good for more than twice the life of the well) cost less than 30% more than wood?

Write, Phone or Wire for complete Information and Prices on INTERNATIONAL "IDECO" Galvanized Steel Equipment.

The International Derrick & Equipment Co.
Columbus, Ohio **Los Angeles, Calif.**

Branches and Warehouses
Tulsa Houston Casper Shreveport Smackover
Oil City Bakersfield Taft El Dorado, Kansas
Wichita Falls Corsicana Mexia New York

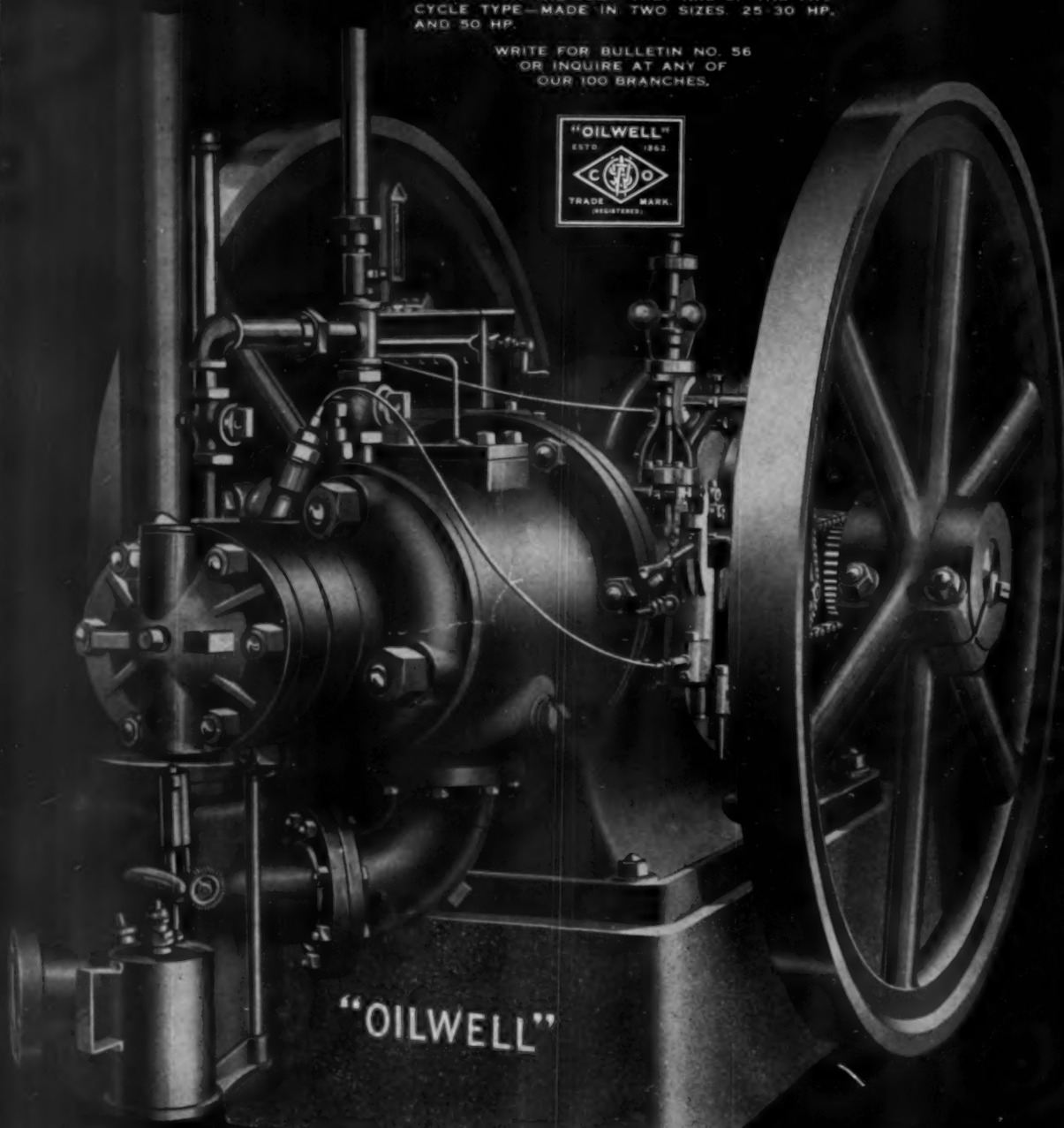
The Largest Company Devoted Exclusively to the Manufacture of Steel (Galvanized) Equipment for the Oil, Gas and Artesian Industries

INTERNATIONAL
(GALVANIZED)
STEEL DERRICKS
Steel Bull, Calf & Band Wheels—Walking Beams—Crown Blocks—
Complete Steel Rigs—Standard Steel Buildings

"OILWELL"
HEAVY DUTY OIL ENGINES

THE ALMOST BRUTE CONSTRUCTION AND THE EVER READY PERFORMANCE OF "OILWELL" HEAVY DUTY OIL ENGINES MAKES THEM HIGHLY DESIRABLE FOR THE GRUELLING SERVICE ENCOUNTERED IN THE OIL FIELDS. THE FACT THAT THEY WILL RUN ON CRUDE OR FUEL OIL IS ANOTHER RECOMMENDATION BECAUSE THE FUEL IS RIGHT ON THE JOB. THEY ARE OF THE TWO CYCLE TYPE—MADE IN TWO SIZES. 25-30 HP. AND 50 HP.

WRITE FOR BULLETIN NO. 56
OR INQUIRE AT ANY OF
OUR 100 BRANCHES.

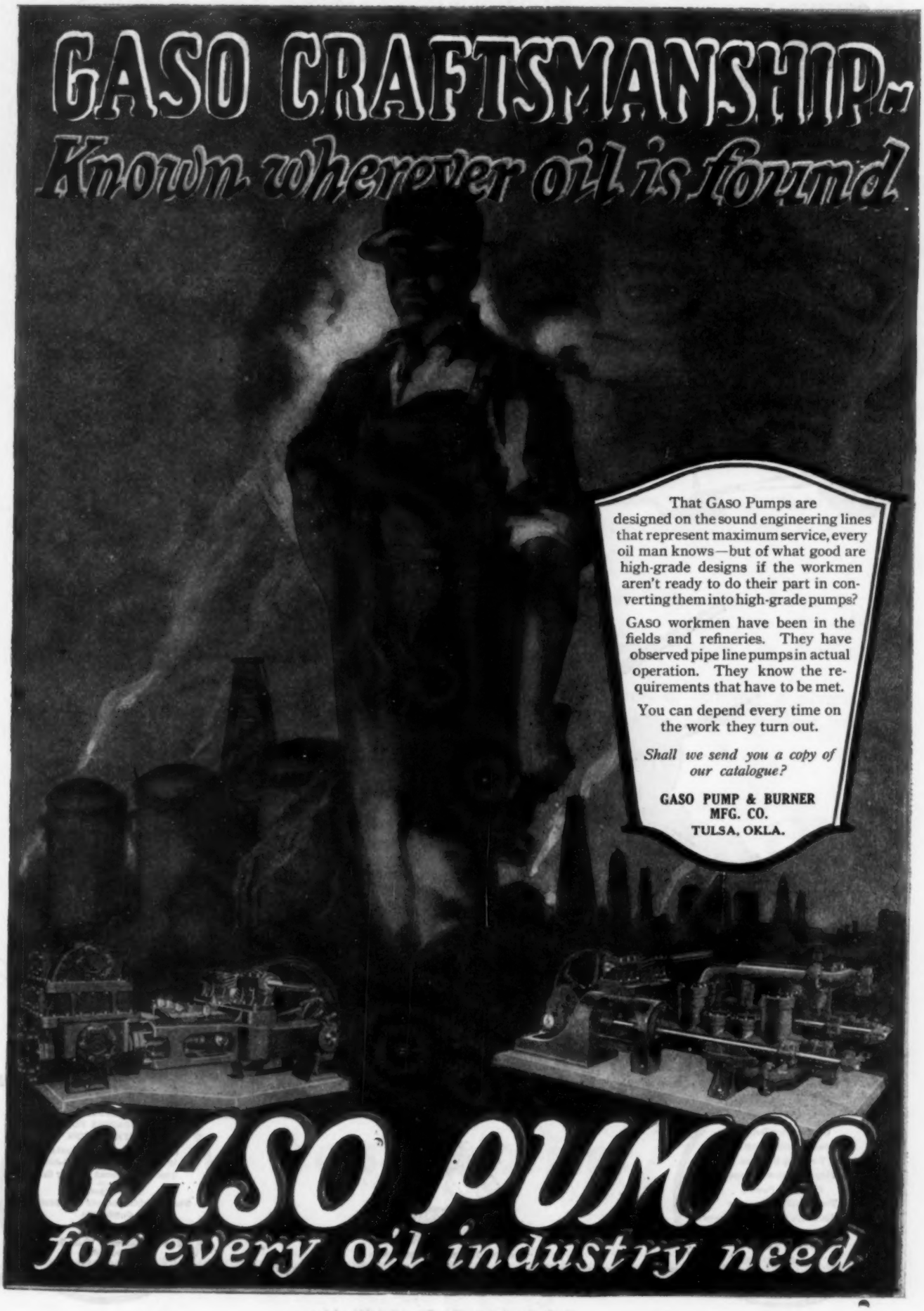


OIL WELL SUPPLY CO.

NEW YORK—LONDON—TAMPICO—PITTSBURGH, U.S.A.—SAN FRANCISCO—LOS ANGELES

WORLD'S OLDEST AND LARGEST MANUFACTURERS OF OIL FIELD EQUIPMENT

THE OIL WEEKLY. Issued weekly by the Gulf Publishing Co., 1716 Dallas Ave., Houston, Texas. Subscription price $1.00 per year; 10 cents per copy. Entered as second-class mail matter December 23, 1916, at the post office at Houston, Texas, under act of March 3, 1879.


GASO CRAFTSMANSHIP—
Known wherever oil is found
That GASO Pumps are designed on the sound engineering lines that represent maximum service, every oil man knows—but of what good are high-grade designs if the workmen aren't ready to do their part in converting them into high-grade pumps?
GASO workmen have been in the fields and refineries. They have observed pipe line pumps in actual operation. They know the requirements that have to be met.
You can depend every time on the work they turn out.
Shall we send you a copy of our catalogue?
GASO PUMP & BURNER MFG. CO.
TULSA, OKLA.
GASO PUMPS
for every oil industry need

Say you saw it in The Oil Weekly

The Wizardry of Concentrated Power

in the Titusville Acme Twin Cylinder Drilling Engine enables it to handle long strings of pipe in a manner that is really magical.

And there is something of magic in its response to the controls. Instant—yet velvety.

The great reserve power, flexibility, economy of operation and upkeep—makes the Titusville Acme Twin the preferred drilling engine for dependable service under every oil field condition.

A descriptive bulletin is yours for the asking.

TITUSVILLE
Twin Cylinder Drilling Engines

The TITUSVILLE IRON WORKS Co.
TITUSVILLE - PENNA.

TITUSVILLE EQUIPMENT
Oil Country Boilers
Steam Drilling Engines
Tice Gas Engines
Flapper Valve Pumps
Pumping Powers
Twin Drilling Engines
Rotary Machines Rotary Drawworks
Swivels Slush Pumps
Crown Blocks
Traveling Blocks
Rotary Drilling Specialties

TITUSVILLE OIL COUNTRY MACHINERY
RUGGED - ENDURING

AFFILIATED COMPANIES FOR DISTRIBUTION
For Mid-Continent, Eastern, Western and Coastal Fields:
The Continental Supply Co.
For California:
The Republic Supply Company of California
For Export:
The Continental Well Supply Company,
No. 2 Rector Street,
N. Y. City

Say you saw it in The Oil Weekly

Oh Doctor!

When you call a doctor do you hesitate in making a choice?

No. When you say doctor, you right then and there know who it is going to be.

You know this doctor has been in business for a long time, making a study of and writing prescriptions for cases of your kind.

He is a specialist. He has a world wide reputation.

He has been successful and your choice is based on your faith in this doctor to write a good prescription.

Now when we advertise that the steel used in the manufacture of our Sucker Rods is rolled to our special analysis, what does that mean?

It means that with thirty years of experience testing steel of different analysis, we have produced a steel which withstands the most severe abuse—it means that we are specialists.

Make Jones Your Sucker Rod Doctor.

The S. M. JONES Co. Toledo, Ohio.

Mid-Continent Office: 601 Wright Bldg., Tulsa, Okla.

when you think of Sucker Rods think of JONES! he specializes!

The World's Largest Manufacturers of Oil Well Pumps and Sucker Rods!

The cost of your oil well pump is but a small fraction of the total cost of your well—therefore you can well afford to choose the best of pumps.

Let us tell you about our Superior Service

Axelson Machine Company

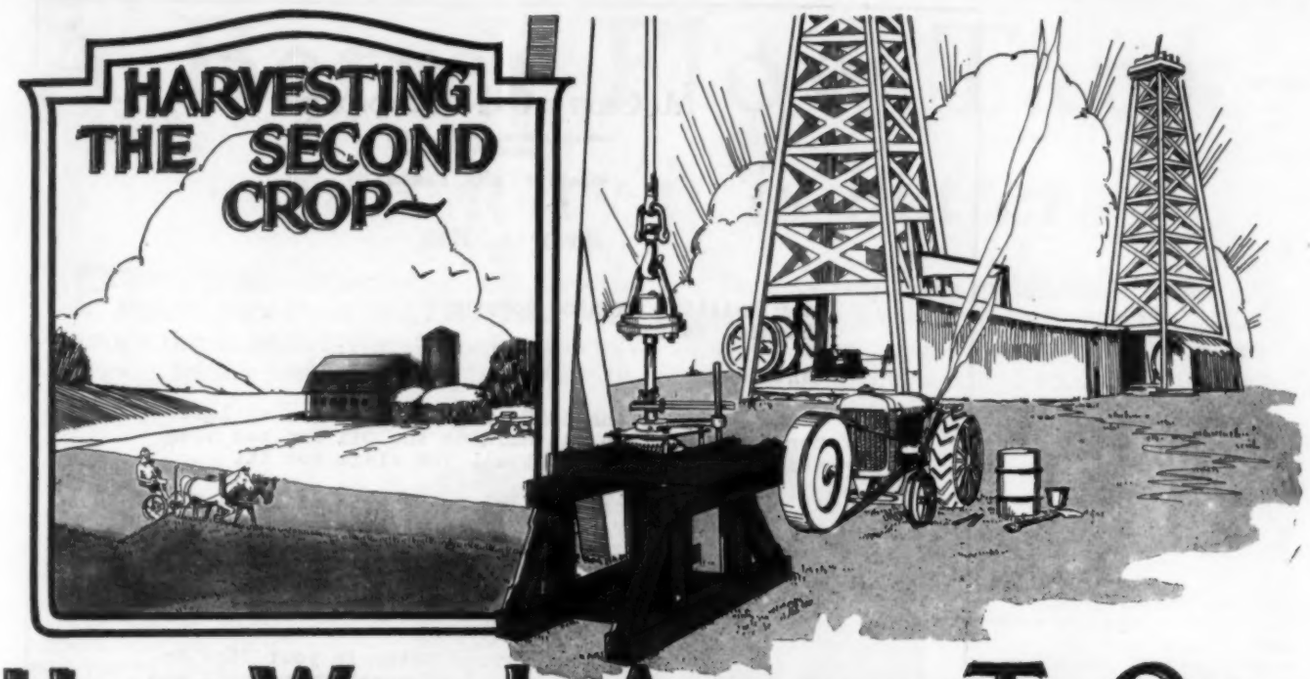
Los Angeles California, U.S.A

Cor. Randolph St. and Boyle Ave.

THERE IS NO ECONOMICAL SUBSTITUTE FOR QUALITY

Post Office Box 337

Mid-Continent Office: 1023 Kennedy Bldg., Tulsa, Okla., Mid-Continent Distributors: Frick-Reid Supply Co. Eastern Distributors: Frick & Lindsay Co. Casper Wyoming Office: with Frick-Reid Supply Co. New York City Office: 30, Church Street.



HOW WELL IT APPLIES TO OIL

HOW MUCH OIL ARE YOU GOING TO HARVEST FROM YOUR OLD WELLS?

Simple cleaning-out may increase your production slightly but it rarely pays because the increased production is not permanent and sand will soon cave-in again. Reaming with JONES REAMER permanently stops that caving. Removes all paraffin, burnt sand and corrosion and opens up the voids in your oil sand. Increases seepage area thereby permitting free flow of oil. Operated on tubing in any well. No special equipment necessary.

COMPARATIVE RESULTS OF REAMING WITH A SIMPLE CLEANING-OUT

Three Bartlesville sand wells producing three barrels each were cleaned-out and produced four and one-half barrels per day. These same wells were then reamed and production was increased in each well to average of nine barrels. Net increase from reaming—four and one-half barrels per day in each well.

WHAT'S A BARREL OF OIL WORTH?

4½ barrels @ $1.85 per bbl., $8.32 per day, $249.60 per month.

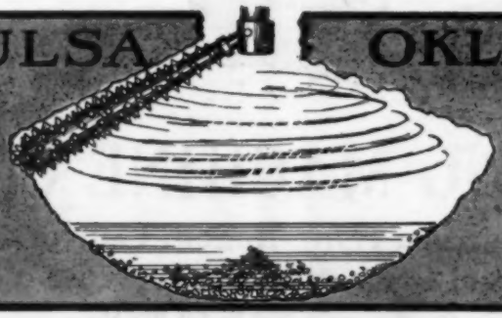
On producing leases your expenses are fixed, consequently such increased income is net profit. In many instances increases as high as forty barrels in a single well have been effected by reaming.
Safe, simple to operate—Economical to use—Built to last. In use by practically all successful operators in all principal fields.

Not an Under Reamer But a Sand Reamer

Write us for circular and prices

JONES OIL WELL REAMER CO.

TULSA OKLA.



INCREASES PRODUCTION OF WELLS THAT HAVE DECLINED

HOLDS THE PRODUCTION OF WELLS THAT ARE DECLINING

McCarty Oil Company

428-430 BOB WASSONEN BLDG.
PHONE 2050
Wichita Falls, Texas

April 14, 1925

Star Drilling Machine Company
Chanute, Kansas.

Gentlemen:

In the 38ST, your company has at last perfected a clean out machine the Oil Man has been waiting for. It will do all you claim for it.

Recently we checked a move with the Star 38 Super-Tractor. We tore down from our No. 1 Cook and moved two miles to our Wilson No. 5 and set up in exactly two hours. That is indeed a record move for us and such a saving over moving the old steam machine.

The four cylinder motor in your Star No. 38 Super-Tractor has plenty of power, runs cool and uses only about ten gallons of gasoline in a nine hour shift.

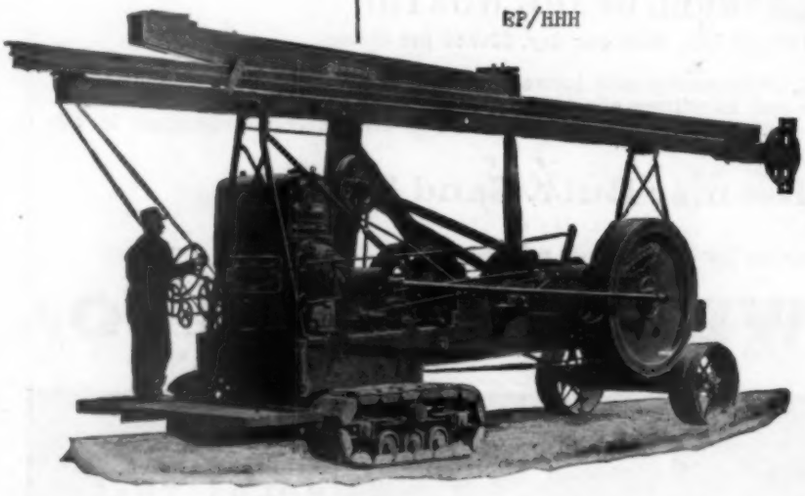
Mr. Martin Salyer and Mr. C. O. Keys, who operate our machine are both drillers and have used steam for years. It is surprising how well they like the gasoline machine and the results they are getting from it. Mr. Salyer says that the Super Tractor is the next thing to a Standard Rig and better in one respect - you can move it.

We are more than pleased with our experience with the Star No. 38ST. From time to time we will advise you further as we intend to keep a check on the machine cleaning out our 1600 ft. wells

Yours very truly,
McCARTY OIL COMPANY
By J. F. Peterson

EP/HHH

Below is illustrated the Star No. 38ST Super-Tractor with 4 cylinder motor for cleaning out to a depth of 2500 feet and drilling to 1000 feet. Still larger sizes in Star Gasoline Super-Tractors are available for handling heavier tools and deeper work both in cleaning out and drilling.



STAR DRILLING MACHINE CO., Akron, O.

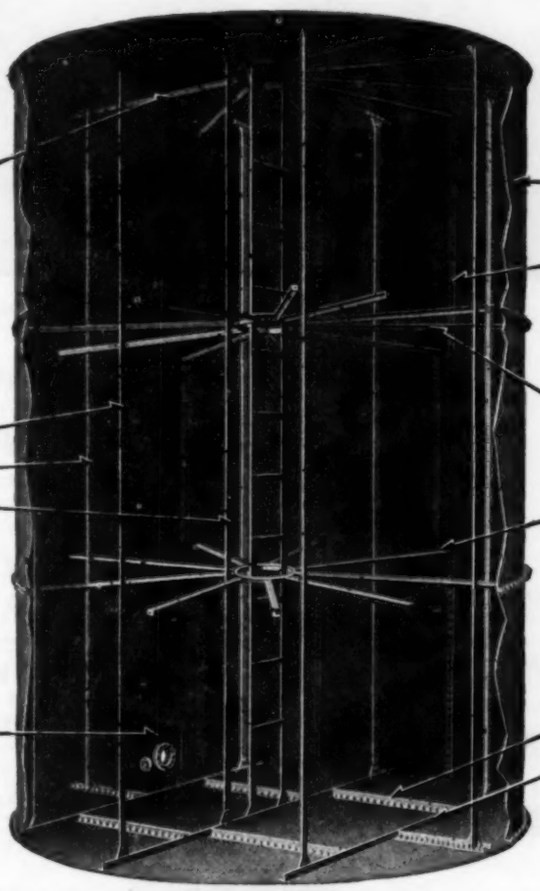
Branches at Chanute, Kansas; Long Beach, California; Portland, Oregon
Export Office: 2 Rector Street, New York City

Say you saw it in The Oil Weekly

A Better Flow Tank—
and why it is better

PRODUCING companies like the way the Parkersburg three-ring Flow Tank withstands the excessive vibrations from heavy flowing wells — ask any Wortham operator.

Parkersburg filling manifolds, conductors, gauge hole covers, pressure-vacuum relief gauges, flow tank valves, and vacuum breakers can be supplied according to customer's requirements.



Deck rafters extend from manhole ring on inside ladder to each side sheet seam, bracing side sheets and supporting the deck.

Sides, bottom and deck are 12 gauge copper-bearing blue annealed steel sheets. Heavy steel channels back each side sheet seam.

Bottom and deck joined firmly by vertical ties, bolted to angles inside each bottom and deck seam.

Intermediate chime braces extend from ring on inside ladder to each side sheet seam.

Cleanout opening 24″ x 24″, flush with bottom. Cover provided with 6″ pipe connection and 2″ water connection.

Steel angles back each bottom seam on inside of tank — steel channels on the outside.

You can get further details on Parkersburg Flow Tanks and other field equipment from our nearest representative — or direct from us

The PARKERSBURG RIG & REEL COMPANY

Main Office and Works, Parkersburg, W. Va. ***New York Office,*** 30 Church St.

California Representatives, BUCK & STODDARD
485 California St., San Francisco, Calif.; Box 720 Arcade Station, Los Angeles, Calif.

District Offices and Distributing Warehouses from which Parkersburg Service is available

TEXAS
*Houston
Beat
Breckenridge
Corsicana
Liberty
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Olney
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Ranger
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Wichita Falls

WYOMING
*Casper
‡Rawlins

LOUISIANA
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Madison
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Parkersburg
Clarksburg

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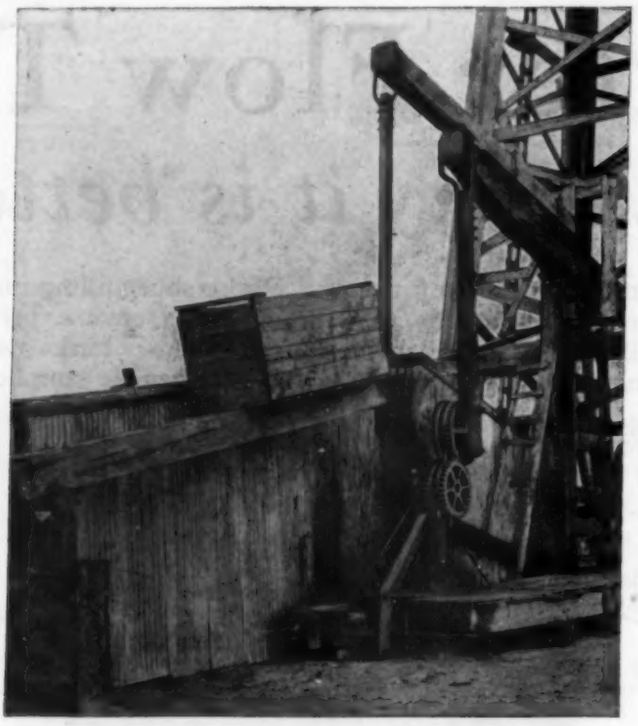
*Tulsa
Bristow
Drumright
Holdenville
Hominy
Okemah
Pawnee
Wetumka
Tonkawa
Wilson
Shidler
Stroud
Wewoka

ARKANSAS
*El Dorado
Louann
Smackover
McNeil

COLORADO
Denver

*District Offices ‡Frick-Reid Supply Co.



Fetty Long Stroke Pumping Attachment in Action

A Smooth Easy Motion

Less wear and more power is an outstanding characteristic of the Fetty Long Stroke Pumping Attachment.

The jerk and slap so characteristic of the ordinary pumping well is entirely eliminated. Greater Operating Efficiency.

Covered by United States and Foreign Patents

R. G. Garretson
771 Raymond Avenue
Long Beach, California.
Tel. 333-433.

R. N. Atmore
404 West First Street
Tulsa, Oklahoma
Tel. 3-3282

R. L. Smith
1308 Fairview Avenue
Houston, Texas
Tel. Hadley 820.

FETTY

Pumping Attachment

LONG STROKE

C. C. FETTY & CO., EL DORADO, KANSAS

Say you saw it in The Oil Weekly

SPANG
Weldless Drilling Jars

"Oil Tool Pusher recommends these Jars very highly"

Excellent Joints

Greatly increased footage drilled

Elimination of Jar Fishing Jobs

Reduction of drilling risk

Three to five times as much service as other jars

Increased profits.

—ends a letter from a Texas user.

And a Tool Pusher (see your own for reference) is a mighty particular individual—where drilling tools are concerned.

Therefore, the recommendation of a Tool Pusher can be taken as coming from an authority on drilling tools.

The special heat-treating process to which every SPANG Weldless Jar is subjected, gives its tough, alloy steel body the close-grained construction which makes for great strength and durability.

SPANG Weldless Jars are properly tempered. They possess wearing heads much longer than is found in the average welded jar.

The excellent and satisfactory service that SPANG Weldless Jars are giving to so many oil field operators, can just as easily be service dedicated to YOUR profit. Specify SPANG Weldless Jars when next you need a drilling jar.

SPANG Thread Protector

Protect your Tool Joints with SPANG Thread Protectors.

Like all SPANG Products they guarantee absolute satisfaction and long, durable service.

SPANG AND COMPANY

BUTLER, PENNA.

Sold by Leading Supply Houses Everywhere

WASTE!

$1,000 THROWN AWAY

Lost Production, $250; Fishing, $200; Tubing, $500.

Our government frowns on waste. It urges conservation of resources, both personal and national, in all industries. No business man should need such urging.

Place a GUIBERSON Catcher on every well

THE GUIBERSON CORPORATION
Box 1106, Dallas, Texas
CALIFORNIA BRANCH; 1506 Santa Fe Ave.

402 W. First St., TULSA
318 First Nat'l Bank Bldg., HOUSTON
506 Trust Bldg., NEWARK, O.

GUIBERSON
BETTER BE SAFE THAN SORRY

Say you saw it in The Oil Weekly

Oil Field Supplies And Complete Field Equipment

Both Rotary and Cable

Including;

Republic Iron & Steel Co.'s Tubing, Casing, Drive and Line Pipe.

Standard Seamless Tube Co.'s Seamless Upset Rotary Drill Pipe and Casing.

American Well & Prospecting Co.'s "Gumbo Buster" Rotary Equipment.

Jones' Acme Sucker Rods and Gas Engines.

American Steel & Wire Co.'s Broderick & Bascom's Wire Rope.

Hughes Tool Co.'s Hughes Rock Bits, Hughes Disc Bits, and Hughes "Acme" Tool Joints.

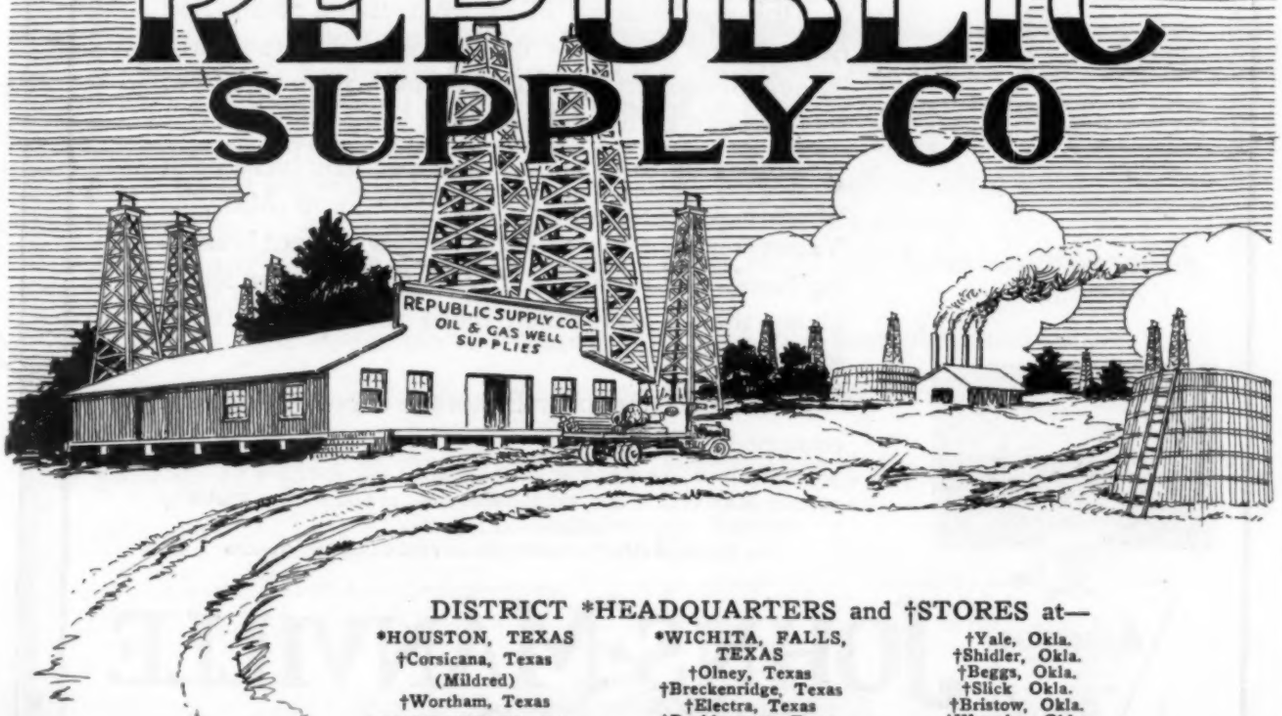
Bovaird & Seyfang Oil Field Boilers.

Wall (Walk Laid) Bull Ropes and Manila Cables.

Rhodes Master Packing.

In Stock Always

REPUBLIC SUPPLY CO



DISTRICT *HEADQUARTERS and †STORES at—

*HOUSTON, TEXAS
†Corsicana, Texas (Mildred)
†Wortham, Texas
*SHREVEPORT, LA.
†El Dorado, Ark.
†Smackover, Ark.

*WICHITA, FALLS, TEXAS
†Olney, Texas
†Breckenridge, Texas
†Electra, Texas
†Burkburnett, Texas
†Duncan, Okla.
*TULSA, OKLAHOMA
†Tonkawa, Okla.

†Yale, Okla.
†Shidler, Okla.
†Beggs, Okla.
†Slick Okla.
†Bristow, Okla.
†Wewoka, Okla.
†Hominy, Okla.
†Okemah, Okla.
†Wilson, Okla.

Say you saw it in The Oil Weekly

Save gasoline

with Johns-Manville Vapor-Tight Insulated Tank Tops

Patented, other patents pending

FIELDS and refineries which would not tolerate the wastefulness of an uninsulated steam line nevertheless often lose thousands of dollars yearly by evaporation from crude and gasoline storage. Yet this loss can be minimized.

Savings up to $14,000 a year per tank have been made by insulating "fifty-fives" with Johns-Manville Vapor-Tight Insulated Tank Tops, which cut breathing losses by thoroughly insulating the vapor space above the oil and which make the roof and eave gas-tight.

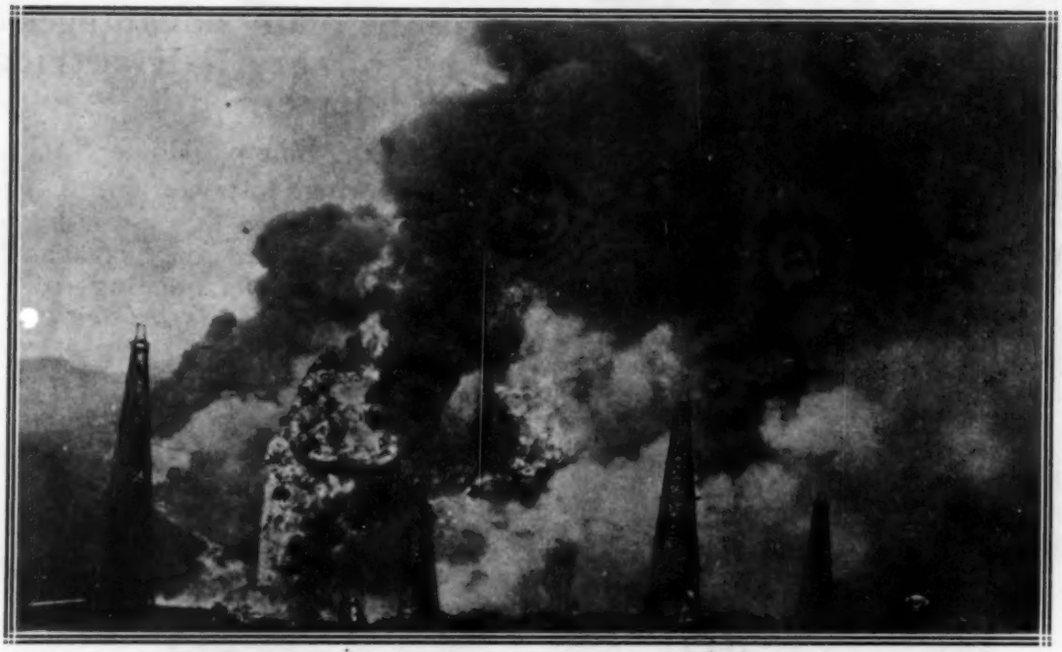
Over 30,000,000-barrels storage capacity has been equipped. Write

JOHNS-MANVILLE Inc., 292 Madison Ave., at 41st St., New York City
Branches in 62 Large Cities
For Canada: CANADIAN JOHNS-MANVILLE CO., Ltd., Toronto

Asbestos and its allied products
INSULATION
BRAKE LININGS
ROOFINGS
PACKINGS
CEMENTS
FIRE PREVENTION PRODUCTS

JOHNS-MANVILLE
Oil Industry Department

YOU CAN'T AFFORD TO TAKE CHANCES



The tremendous pressure that continually bombards your well-settings make it absolutely imperative that your heavy duty valves be capable enough of withstanding strain.

Tough Ilmenite Steel construction throughout—the rigid twenty-four hour kerosene test to which it is subjected make the KERO-TEST Cast Steel Valve fully able to bear the responsibility of the most severe oil field service.

Each individual valve is carefully tested before shipment and a certificate assuring its perfect construction is given.

Your well or pipe-line needs the KEROTEST to guarantee maximum safety.

Our descriptive catalog will give you complete details.

Pittsburgh Reinforced Brazing and Machine Co.

Pittsburgh, Penna.

Carried in stock and sold by

GRINNELL COMPANY OF THE PACIFIC
Los Angeles San Francisco

NORVELL-WILDER HARDWARE COMPANY
Houston Beaumont Shreveport

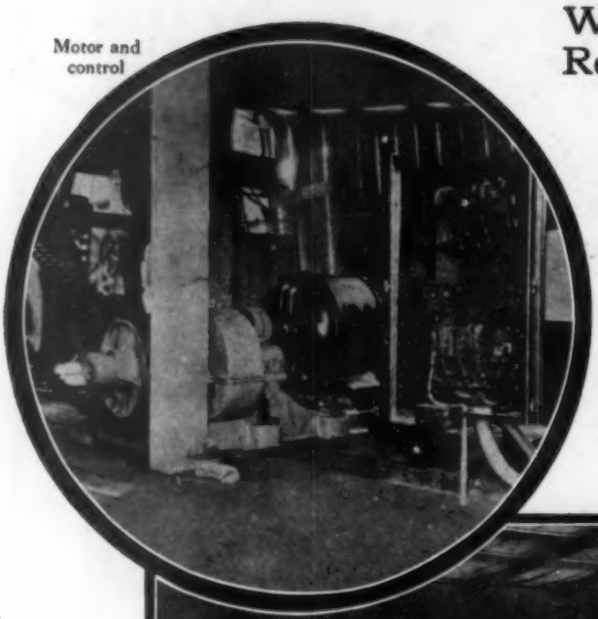
OIL WELL SUPPLY COMPANY
Oklahoma Kansas Colorado Wyoming

Export Distributors

OIL WELL SUPPLY COMPANY
Pittsburgh New York Tampico London

Valves KERO-TEST **Fittings**

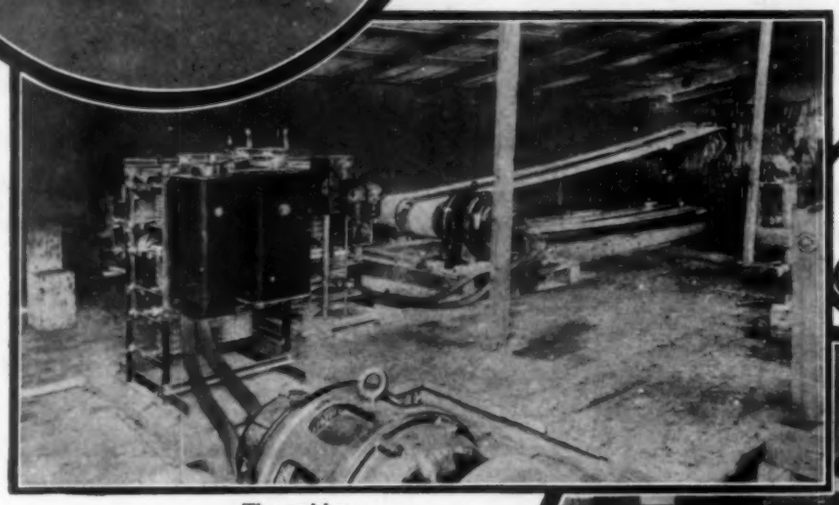
All-Electrical Rotary



Motor and control

A few of the many advantages of Westinghouse All-Electrical Rotary Equipment are:

—More hole per "tower."
—Savings in power costs.
—Slow speed to meet every requirement, and as fast as you wish for hoisting—all controlled from draw-works.
—Easy to handle.
—Crew is comfortable in all weather.
It is safe.

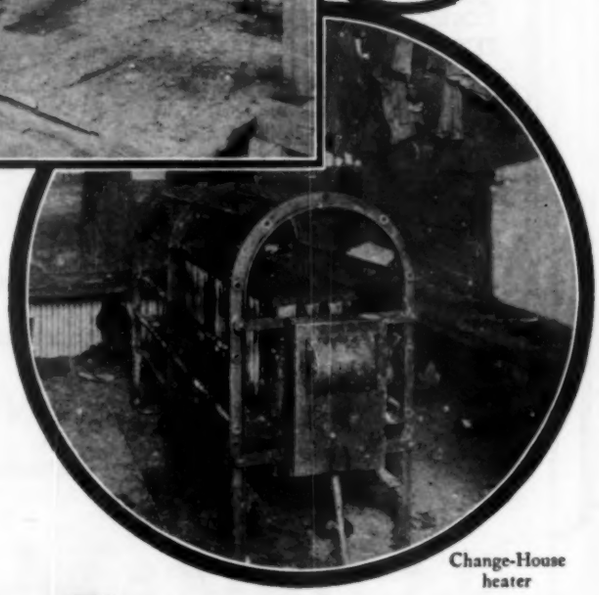


The mud hogs

W WESTINGHOUSE ELECTRIC

Our nearest district office will supply complete information about Westinghouse All-Electrical Rotary Equipment.

Westinghouse Electric & Manufacturing Co.
East Pittsburgh Pennsylvania
Sales Offices in All Principal Cities of the United States and Foreign Countries



Change-House heater

Westinghouse

X 80632

Say you saw it in The Oil Weekly

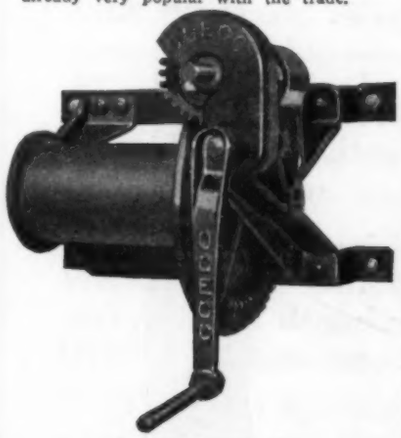
OCECO Produces

an improved line of Safety Tank Winches

A Complete Line
Approved by the Underwriters' Laboratories, Inc.

OCECO NO. 2A
Especially suited to refinery tankage. Recommended for use with swing lines up to 6 inches in diameter on tanks not over 25 feet high. A powerful, efficient winch yet only 70 pounds in weight.

OCECO NO. 3
Chosen mainly for refinery and pipe line tankage. For use with swing lines up to and including 10 inches in diameter on tanks as high as 40 feet. A winch that is already very popular with the trade.



OCECO NO. 4
A heavy duty, two-speed winch for large lines. Designed for swing lines 12 inches in diameter and larger. Handles on low gear a load of 5000 pounds with a pull of but 60 pounds on the crank.

These winches are shipped completely assembled ready for attaching to tank shell.

JUST as you liked the former Oceco models you'll like these—only better.

They are built with the worm gear which has proven so popular. They all have castings of semi-steel for superior strength.

And for service—these winches offer you the utmost:

1. **Safety for the operator!** Located waist-high on the side of the tank, the Oceco is operated from the ground. No climbing to dangerously wet, slippery roofs.

2. **Safety for operator and tank!** Driven by worm gear the Oceco locks when operator takes his hand off the handle. No danger of broken arms; no danger of holes punched in tank bottom by falling swing line.

3. **Safety for tank contents!** Tamper-proof! Upon removal of crank the Oceco is securely locked.

You can appreciate that all these features mean lower operating costs and lower maintenance. Is it any wonder that the Oceco is the most popular and widely used Safety Tank Winch on the market today? And now from this complete and improved line you can select the one best adapted to your particular needs.

The Oil Conservation Engingeering Co.

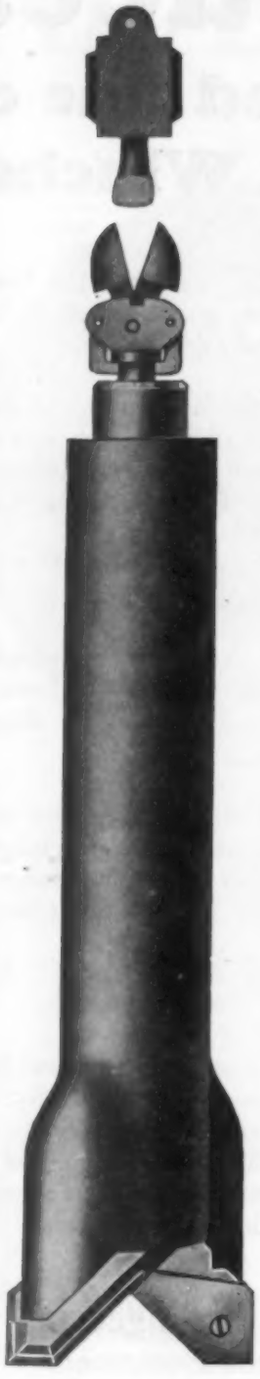
Headquaters for Tank Equipment

Addison Road and N. Y. C. Tracks

CLEVELAND, OHIO

25 Broadway, New York
325 Iowa Building, Tulsa, Okla.
O-S Building, Casper, Wyo.
318 E. 12th St., Los Angeles, Cal.
440 Howard St., San Francisco, California.
Beaumont Export & Import Co., Beaumont, Tex., & Tampico, Mex.

OIL TANK OCECO EQUIPMENT
SAVES EVAPORATION AND PREVENTS FIRE



The Standard Collapsible Rotary Drill passes down through the drill stem to bottom of the collar, where it expands to diameter of the hole and becomes locked in that position for drilling with 4-inch drill stem.

It can be equipped to drill a hole of any diameter between 7⅞ and 10⅞ inches, or any intermediate diameter.

It drills faster than any other bit because it has sharp cutters at the bottom practically all the time. The cutters are renewed in a very few minutes, without withdrawing the drill stem.

The drill stem remains in the hole from the time drilling begins until the hole is completed.

The time gained by not removing and replacing the drill stem together with the fuel saved during such work, greatly decreases cost of a well.

Write for folder containing full information

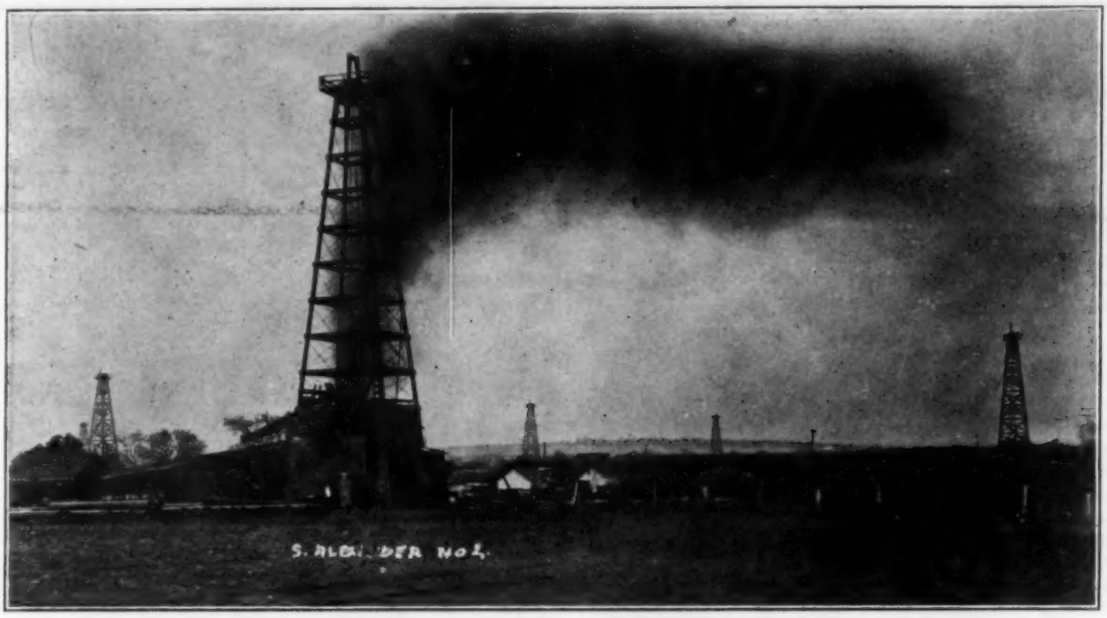
INVENTED, PATENTED AND MANUFACTURED BY

O. M. CARTER

W. T. HILTPOLD, SALES AGENT

206-7-8 SCANLAN BLDG.

HOUSTON, TEXAS



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With this terrific pressure behind the tools something had to go.

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Wertzberger Derrick Co. Tulsa, Okla.

Mid-Continent Building

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Not all work in Mexico

The OIL WEEKLY

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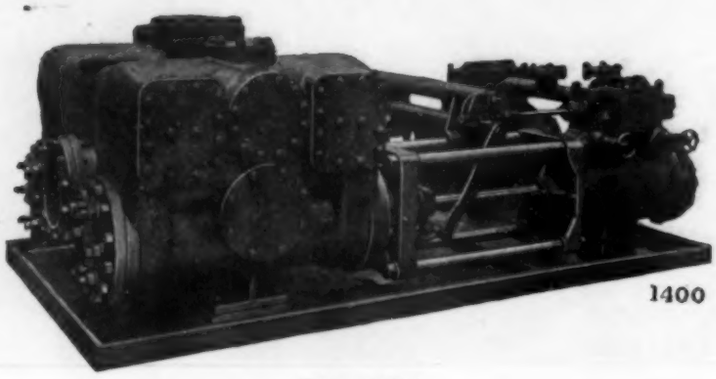

Fig. 1400
12x9x18" Block Valve Pump with base plate drip pan, for 300 lbs. working pressure

The new TRANSIT Heavy Duty Block Valve Pump was designed to handle either hot or cold liquids or semi-liquids around refineries. The material pumped is introduced and expelled from the pump through large direct fluid passages that cannot trap air, and through special design valves now made larger than ever.

This pump can be operated so hot that the fluid end will glow on a dark night, and so cold that frost will form on the fluid end. No trouble will be experienced from loose valve stems, loose valve guards, or loose separate valve seats, because such things are not part of this pump.

Pumping hot tar around 700 degrees Fahrenheit is hard on rod packing. So the stuffing boxes are made deeper to lessen wear on the packing and rods. Tie-bar construction renders the stuffing boxes easier of access, thereby inviting more frequent and accurate adjustment.

(Complete information gladly furnished)

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OIL CITY, PA.

DISTRICT OFFICES:

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Gas Men Can Attend Technical Sessions

All committee meetings at annual convention of Natural Gas Association will be open to delegates

Gas Supply Men Will Furnish Entertainment

IN order to give all delegates the benefit of technical discussions, the Natural Gas Association of America has announced a departure in convention procedure for the Atlantic City meeting, May 18 to 21 inclusive, by having all committee sessions open to the membership. The meeting will be in connection with that of the Gas Supply Men of America. General sessions will be in the Steel Pier.

This, the twentieth annual convention of the association, will be presided over by John B. Corrin, president of the organization and vice president and general manager of the Hope Natural Gas Company. Mr. Corrin has been connected with subsidiary companies of the Standard Oil Company (New Jersey) since 1890, when he entered the ranks of employes of the South Penn Oil Company. Later he went with the Hope and other of the gas companies, becoming assistant superintendent in 1906.

His efforts to find gas deposits through deep drilling have brought him and his companies into prominence. While these successful ventures have been spectacular, he also has followed a consistent policy of taking gas from small producers and the residue gas from oil production.

The first day of the convention will be devoted to the session of the supply men, the exhibits and sessions of some of the committees and sub-committees. Meetings of the Natural Gas Association will get under way the next morning.

Committee Sessions

In addition to the exhibits Monday there will be meetings of the Technical and Research Committee of which H. C. Cooper of Pittsburgh is chairman, at the Traymore Hotel, and of the following sub-committees: Gas Measurements, Forrest M. Towl, N. Y., chairman; Gas Transportation, H. G. Hancock, Bartlesville, Okla., chairman; Gas Utilization, E. D. Leland, Pittsburgh, chairman, and Electrolysis Correlating Committee, J. D. Creveling, New York, chairman.

All these sessions will be open to members of the association, who undoubtedly will derive considerable benefit by listening in.

Monday afternoon, at 2 o'clock, the Natural Gas Supply Men will meet on the steel pier, at 5 p. m. the board of directors of the Natural Gas Association of America will meet at the Traymore Hotel.

At 6 p. m. the board of directors will hold their annual dinner at the Traymore. At 8:15 in the evening the natural gas supply men will stage their great water carnival at the Hygeia Pool along the Boardwalk. Some of the most noted girl swimmers in the world will compete in the contests arranged for this affair which promises to be the most interesting event of its kind ever held.

President Corrin will open the first general session with an address in which he will discuss the activities of the organization. This will be followed by a report of the memorial committee. General Secretary William B. Way will submit the report of the board of directors, treasury and membership committee. James H. Henderson of the Peoples Natural Gas Company of Pittsburgh will follow with an address and then there will be a general discussion.

W. Re. Brown of the Ohio Fuel Gas Company, Columbus, Ohio, chairman of the Wrinkle committee, will report its activities and F. F. Schauer of the Equitable Gas Company of Pittsburgh will report for the committee on Wrinkle awards for 1924.

A brief period of entertainment will be followed by one of the most important addresses of the convention, that of P. G. Gossler, chairman of the board of the Columbia Gas and Electric Company of New York City, on "The Value of Service." This will be followed by a general discussion and then C. W. Sears of Wicihta, Kan., will present a review entitled "Twenty Years Ago." General Secretary Way

The famous "Boardwalk" at Atlantic City where members of the Natural Gas Association of America will mingle during the 20th annual convention to be held May 18th to 21st.

Meet You in Atlantic City

WHETHER you produce gas or sell it, the twentieth annual convention of the Natural Gas Association of America deserves your presence May 18 to 21. The program has been drawn so any man can gain knowledge of his business by attending the sessions. Further than that, the committee meetings have been thrown open to members of the association.

At the last convention, one executive of a nationally known gas concern stated his position concerning Atlantic City as a meeting place.. He said he wanted to reward some of his men by giving them opportunity to gain the knowledge possible there and at the same time afford his men a chance to enjoy the wonders of the most famous resort on the Atlantic seaboard.

So it is an opportunity to combine business with pleasure. Atlantic City is at its best in early spring. Thousands go there daily just for its pleasures. The natural gas producers and sellers have an opporunity to enjoy its pleasures and at the same time make capital of the sessions of their organization.

Exhibits of the supply men will bring the latest in equipment before the body.

Atlantic City will be like going to school and going to play, a combination that did not exist back in school days.

If you did not make your reservation early, make it now.

will present a paper on "The Natural Gas Industry."

General Session

The second general session, on Wednesday morning, will be opened with a report from H. J. Hoover of the Blaine-Thompson Company, Cincinnati, Ohio, on "The Progress of the Magazine." Another high light of the convention program will follow when E. G. Kettering, chief engineer of the General Motors Company, Dayton, Ohio, talks on "Fundamentals of Heat Application." This will be followed by a general discussion of the subject and then another speaker of exceptional importance will be Henry L. Doherty of Henry L. Doherty & Co., New York City, whose subject will be "House Heating and Industrial Gas." After a program of entertainment and the general discussion, this session will close with an address by E. O. Bennett, natural gas engineer, United States Bureau of Mines, Bartlesville, Okla., on "New Methods for the Control and Operation of Gas Wells."

J. B. CORRIN
President of the Natural Gas Association of America

The twentieth annual dinner of the Gas Association will be held Wednesday evening at 6:15 o'clock in the Traymore Hotel. The affair this year promises to be the most interesting ever held by the gas men, who will have among their speakers John Gribbel of Philadelphia, Pa., Willard Scott, Brookline, Mass., and others whose names will be announced later. A. W. Robertson of the Equitable Gas Company, Pittsburgh, one of the best known and most popular members of the gas fraternity of America, will be toastmaster. The closing session of the convention on Thursday morning will consist very largely of committee reports and the nomination and election of officers.

The plant to throw open committee meetings to the entire membership of the association is a new departure in convention procedure, inasmuch as a great many meetings of this character are held in executive session and the general membership is permitted to know only that which is contained in the report the committee submits to the convention. It is the purpose of those who are guiding the affairs of the association to endeavor to bring about the closest possible relationship and greatest spirit of co-operation among the membership. For that reason the convention this year will be of far greater importance to the individual gas man than any that ever have been held.

Tanks Doheny Built for Navy At Perl Harbor Are Rusting

Washington, D. C.—Failure to use the oil storage depot at Honolulu, built under the Doheny-Elk Hills oil contract which the government is seeking to have set aside, is resulting in the erosion of the tanks, the navy department has been informed. Orders issued by Special Counsel Roberts and Pomerene, it is declared by Secretary Wilbur, require the department to leave the tanks empty in order that nothing may be done which would indicate an acceptance by the government of the tanks.

Frank J. Hogan, counsel for Edward L. Doheny, sme time ago, it is declared, suggested that, in order to save the tanks from damage, the government allow Mr. Doheny to supply oil under arrangements which would protect the government's rights in the case. This was declined by the government counsel.

One tank has been in use since last summer, Mr. Hogan said, having been secured by special permission without prejudice to the government's case. At that time an offer was made to the government to use any number of tanks under the same conditions. It was also suggested that, to keep the tanks from rusting the government put a little oil in each, which would not have prejudiced the rights of either side in the litigation.

A. W. LEONARD
Vice President of the Natural Gas Association of America

Mid-Continent Crude Structure is Strong

Refiners pretty well sold over May; premiums probable when additional gasoline moves on summer demand

By J. Kent Ridley
Staff Representative

WHILE the depletion of gasoline stocks at refineries following the purchase of a big volume of gasoline by the Standard Oil Company (New Jersey), as reported in a special telegram on this page in last week's issue, and subsequent purchases by other buyers in anticipation of a substantial advance, has heightened the optimism of the producers of light oil in the Mid-Continent area, the refiners are not yet so established that their position is economically secure.

However, conditions over which the producers have no control will prevent, it appears, any boosting of output which might weaken the position of crude which is now sufficiently strong that it may be reasonably expected that the summer motoring demand will immediately be reflected in the crude market by the establishment of substantial premiums. The better grades of oil, continually growing more scarce, are so much controlled by the larger units that the small refiners will be put into keen competition among themselves for crude supplies to provide their stills to capacity.

Meantime the gasoline purchase referred to has made the refined market strictly a Standard Oil market. Most refiners are pretty well sold up for May, and about 30,000 barrels daily is being drawn from Oklahoma storage to fill current charging requirements.

The advance in the posted price for Smackover heavy oil apparently is in recognition of the attitude taken by producers that they would store the flood of cheap crude rather than sell at the price which was offered. This advance has strengthened the fuel oil market in all quarters.

Further relief through the purchase of more motor fuel from Mid-Continent refiners by the Standard Oil Company (New Jersey) has been afforded the last week and the refined market situation in the light oil area of that section is developing evidences of increasing firmness. This condition, however, may be a temporary one, as there is little or no disposition to hold down crude takings of refiners more nearly in proportion to gasoline stocks.

Last week's purchases by the New Jersey company took up considerable of the surplus motor fuel on hand at independent plants and has placed these refiners in a more advantageous position as to being able to take care of their crude requirements in a way that will be more satisfactory to the producer. As a result of this purchasing of excess accumulations independent buyers in the light oil area of the Mid-Continent are showing increased signs of aggressiveness and again are going out after high gravity crude, with premiums as inducements.

Light Oil Firm

That the light oil market in the Mid-Continent is sound is attested by the continued steady prices as posted by the major purchasing agencies. It is known that the Prairie is not getting an over-abundance of high gravity crude and neither is Sinclair. Both companies report a fairly steady demand from their Northern and Eastern refinery connections and it is believed that no downward revision in price schedules will be made so long as Atlantic seaboard refineries maintain their present level of operation.

An easing off by refiners in the Appalachian region, however, can materially alter the present crude situation. Producers in Pennsylvania are evidencing a disposition to sell a good part of their current production and so long as this continues Mid-Continent light oil will not show the gains it should ordinarily at this season of the year. Statements as of May 1 in the Appalachian field showed runs from producers to pipe line companies as 75,844 barrels and shipments from pipe line companies to refineries as 104,551 barrels. Independent refiners with regular contracts continue to pay attractive premiums to producers for their crude supply. There is little new premium crude being taken on, however.

In the Salt Creek field in the Rocky Mountain states crude now is being purchased on a gravity basis with Mid-Continent classification and price schedules obtaining. The grades governing the purchase of Salt Creek oil are: 33 to 35.9 gravity, $1.80; 36 to 38.9 gravity, $2.00, and 39 to 41.9 gravity, $2.25. Most of the oil from the Salt Creek field comes under the $2 grading and a relatively small amount commands the lowest and the highest quotations. The rapid development of New Mexico as an oil producing state is boosting the production totals for the Rocky Mountain region.

North Texas Gasoline Advances

The advance of refiners' quotations on gasaline a full half cent last week in the North Texas district on the strength of the re-appearance of Standard of New Jersey in the market with a large spot order was accomplished with little effort, as most of the independent refiners have contracted over the balance of May the bulk of their gasoline output obtainable from existing crude supplies for this period. This boost in the manufacturers' price on gasoline places U. S. Motor grade gasoline at 11c or better, but further increases must be forthcoming before independent refiners can profitably operate on high gravity crudes costing from $2.25 to $2.60 delivered in the plant. Since fuel oil price advances ranging from 2½ to 10 cents per barrel accompanied the upward trend of the

Wild gas flow from Lion Oil & Refining Company's Murphy 1, in section 9-16-15, a Smackover deep well which went wild and cratered.

gasoline market on the strength of a 50 per cent boost in the posted price of Smackover heavy oils, the North Texas refiners are now seeking additional crude supplies to increase their plant operations in anticipation of an early return of favorable refined market prices.

The supply of available crude in the North Texas district has been reduced somewhat in recent weeks by reason of major companies buying producing properties from independent companies and individuals that catered to premium offers of independent refiners, and the small plant owners are experiencing difficulty in locating convenient crude connections to augment their refinery operations. The prevailing premium offers are now limited to 15 cents per barrel above the posted price on spot crude, but more attractive bonuses are almost certain to follow the next substantial advance in refined products, as the independent refiners will restore their plant operations to normal as soon as market conditions permit and will make a bid for the necessary crude.

The independent refiners' campaign for light oil in the Mid-Continent area during the approaching heavy summer motoring season gives promise of being more ardent than has prevailed for some years past, as low gasoline and fuel oil prices have prevailed since the beginning of spring while crude remained unchanged in price and higher than normal. This condition has resulted in small plant owners surrendering desirable crude connections in order to survive, and their working capital has been taxed to such an extent that no funds are available to purchase crude and store same against the peak summer demand. The absence of any prospective flush fields in the Mid-Continent at present is causing the major crude buying agencies and the independent buyers to begin looking forward to this expected scrambel for light oil.

The decline of Magnolia Petroleum Company's daily crude runs from the Mid-Continent area below its refinery needs several months ago was partially overcome during April when a daily average of 56,509 barrels was maintained, as compared to 53,265 barrels daily average in March. Magnolia has been making withdrawals from reserve crued stocks since last November when its daily runs amounted to 75,044 barrels, and faces further reductions in stocks unless new fields are uncovered shortly within reach of its pipe line system. Magnolia's daily average runs for April, 1924, amounted to 71,145 barrels.

The daily average production of the Big Lake field in West Texas amounted to 29,125 barrels last week, thereby placing it in third position of Texas' major fields, and the area carries possibilities of becoming one of the largest producing areas in the Mid-Continent district this summer, if facilities can be arranged to move the oil as produced. Humble's eight-inch line and tank car shipments are taking the present production, which climbed to above 33,000 barrels for a single day late last week, with further increases in sight from tests nearing the oil pay level.

D. & B. Enlarging Plant

Los Angeles, Calif.—The D. & B. Pump & Supply Company is building a large addition to its plant. The fireproof structure is 180 by 50 feet with an ell 20 by 50 feet. The addition furnishes about 25 per cent more space in the machine shop. The structure is of late design, providing most pleasant working conditions for the men and providing space for considerable new machinery.

Enter Steel Plumb Bobs As Fire Generating Hazard

Gaugers of the Pure Oil Company in Oklahoma shortly will be carrying measuring lines, equipped with brass plumb bobs. It took a tank fire to bring the change in the material for the plumb bobs.

While preparing to gauge a tank at Cushing, a gauger for the company dropped the steel plumb bob from his pocket. The gauge hole was open. There was a spark, then a blaze. The loss was 25,000 barrels of oil and damage to a tank and other property.

When the purchasing department sent out to find brass plumb bobs none was available through regular channels. So they had to be ordered especially.

C. C. Fetty of C. C. Fetty & Co., manufacturers of the Fetty long stroke pumping attachment, has returned to the company headquarters in El Dorado, Kan., after an extended business trip in California.

Tank fire that resulted from a steel plumb bob striking the top of the tank, with gauge hole open.

Court Orders Prompt Closing Of Red River Receivership

Washington, D. C.—The United States Supreme Court Monday directed the receiver in the Red River case to make preparation for promptly closing the receivership and submitting a final report.

The court approved the receiver's fourteenth report and directed him to apply to receivership expenses the balance of approximately $6800 remaining in his hands to the credit of river bed wells, and to pay the several claimants interested in the Texas or flood plain wells the balance remaining in his hands to the credit of such wells and heretofore reserved to meet possible receivership expenses. In closing the receivership it was directed that all books and papers in the case shall be stored for a period of three years with the Security Storage Company, Washington.

Orders of the court today confirmed the report by Joseph M. Hill, special master. The claim of T. P. Roberts and A. H. Britain to the royalty interest in the impounded proceeds of oil and gas taken from certain of the receiver's wells was sustained. Joseph M. Hill will get $2250 for services as special master and $223.36 for expenses, the net balance of such royalty interest remaining after making the required expenditures to be paid to Roberts and Britain, but neither they nor the Durfee Mineral Company are to be reimbursed for expenses incurred in producing witnesses before the special master or having the evidence reported.

Vollmer in California

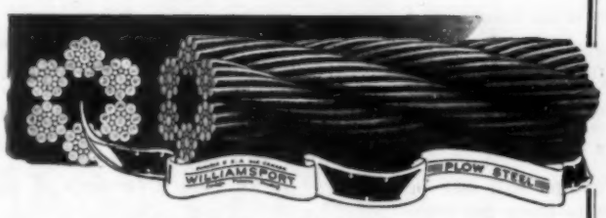
A. L. Vollmer, representing the Thrift Corporation of Houston, Texas, is in California looking after business for his concern, making headquarters at Los Angeles.

Movement of California Oil for Four Months

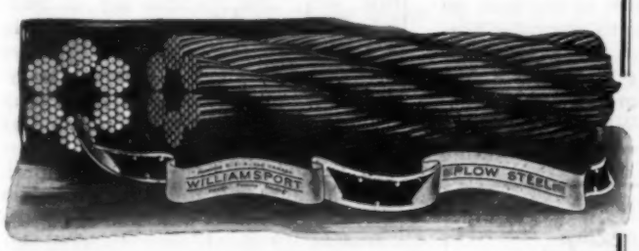
Los Angeles, Calif.—During the four months ending with April, a daily average of 52,995 barrels of California crude oil was shipped out of Los Angeles harbor to points on the Atlantic domestic coast. The total movement in April was 1,481,515 barrels, about 400,000 barrels under March movement.

During the same four month period, a daily average of 13,488 barrels of California gasoline moved from Los Angeles to Atlantic domestic points, but the movement in April totaled 925,502 barrels, or a daily average of 30,850 barrels for the month. The movement last January was small, no gasoline moving to points mentioned in February and only 461,769 barrels moved in March.

Atlantic foreign points drew 164,165 barrels of crude, 243,702 barrels of gasoline and 75,000 barrels of crude naphtha out of Los Angeles harbor in April.



Plow Steel Tape Printed in Green



DON'T
WORK UNDER THE HANDICAP OF DOUBT!

Able Engineers will tell you "No driller should use a

WIRE LINE

without positive knowledge of its grade (tensile strength)" and yet—many lines of unknown grade go into service every day—that are sure to produce all sorts of trouble—because they are the WRONG grade—and the drillers don't know it.

WILLIAMSPORT WIRE LINES
Prove Every Grade

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A patented Telfax Tape, woven into and throughout the hemp core of all Williamsport Lines show Factory certification of each grade in plain English and distinctive color.

This protection is worth more to the user than the line costs and may save many times the cost of the line.

No other wire line gives you this valuable protection.

Let us tell you more about it.

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Main Office and Works: Williamsport, Pa.
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Houston Graham Mildred Shidler Blackwell
Ardmore Holdenville Bristow Smackover
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Casper

WILLIAMSPORT
SERVICE IN EVERY IMPORTANT FIELD

Midwest Employes Have Traveling Library

Industrial relations department has system of supplying books of interest to men in camps

By J. F. Carter, Jr.
Staff Representative

A TRAVELING library system that carries to field men and other employes of the company in the main camps and out-of-way places the latest and best in current fiction, works of well known writers, history, travel, science, biography, etc., has been devised by the industrial relations department of the Midwest Refining Company. Since its inception in 1921 the system has proved unusually successful and with slight variations may be applied by any other oil company.

The Midwest traveling library system is under the personal supervision of Burke H. Sinclair of Casper, director of public relations of the Midwest Refining Company, who is responsible for the statement that during last year the 800 or more books in the libraries were read more than 4000 times. Every effort is made to obtain the class of literature that will be of general interest and to this end a careful check is made of the latest publishers' announcements so as to include the most recent releases.

At first seven libraries were started by the Midwest Company. The idea met with such instant and popular approval on the part of the employes that it was necessary to extend the system to all those throughout the organization who were not at first included in the experimental itinerary. The result is that today there are in all thirteen libraries going the rounds and nearly every book shows unmistakable signs of having been frequently used.

So that the company's wildcat locations and hospitals situated apart from the main Midwest camps will not be deprived of the benefits from the traveling library system, the plan has been adopted of taking the old books that have completed the rounds of the main camps and bundling them into packages and sending them to the men on wildcat locations and to company hospitals. By the time these have finished with them the books have just about served their purpose and are unfit for further use. When a special occasion arises, however, the men out on wildcat locations and in hospitals are sent special packages of books after application has been made to the industrial relations department in Casper.

Midwest Traveling Library

DEPARTMENT OF INDUSTRIAL RELATIONS

THE NUMBER OF THIS BOOK IS

No 2460

RULES

1. Only one book at a time may be taken from this Library by each person. This book must be returned before another is taken out.
2. Each book may be kept for **Seven Days.** A fine of Ten cents per day will be charged for each day the book is held over that time.
3. Books may be renewed for an additional three days, but the volume must be brought to the office to make such renewal.
4. Books lost or destroyed by the borrower must be paid for by the borrower at cost price.
5. No books may be taken from the Library within seven days of the date when the Library goes to its next location. Violation of this rule will result in the violator being deprived of the privileges of the Library.
6. Only Midwest Employes may borrow books from the Library.

KEEP BOOKS CLEAN, REMEMBER THE FELLOWS IN THE NEXT CAMP ARE EXPECTING THEM. PLEASE CO-OPERATE.

Figure A

Location Salt Creek Home Camp
Date March 1, 1923

Director of Industrial Relations,
Casper, Wyoming.

Library No. 1 was today sent from this station to Salt Creek Electric Plant. When it left here it was in good order with the following exceptions: (State here any exceptions and any shortage in books.) No exceptions

John Doe
CHIEF CLERK OR SUPERINTENDENT

Figure B

Books Well Used

As evidence of the fact that the books contained in the traveling library system are taken care of and not abused, there were only six volumes lost during the entire period covered by the records of the industrial relations department for 1923.

The following detailed explanation of the workings of the Midwest traveling library system is given by Mr. Sinclair, who also describes the various forms and blanks used in operating the system:

"We have at present thirteen camps that are on the itinerary of the system. As a matter of fact, there are two systems—one designed to take care of the small camps with small library cases and one to take care of the larger camps with a larger supply of books. Since the operation of the two systems are identical, however, the same description will cover each.

"Our large library consists of seven cases containing approximately 65 books each. These traveling cases are made in our own shop and are extra strong and heavy so that they will stand the traveling required by truck, train, etc. The libraries are all padlocked and a master key remains in each camp so that a transfer of keys when the library moves is unnecessary. These seven libraries circulate among our seven largest camps, remaining at each location two months. A few days before the first of each month when the library is to move, letters are sent out from this office advising the custodian of the library to send his case on to the next location, which is specified, and in turn he will receive in due time a new case.

"When the custodian at a camp sends his library on to the next location, he forwards directly to this office the form marked 'B'. When he receives the new library that comes to him he forwards to this office dircetly the form marked 'C'. In this way this office in continually in touch with the movement of each case. The chief clerk, as a general thing, at each camp is custodian of the library and gives the books out to the borrowers.

Book Records

"All books loaned out are recorded with the number of the book, the name of the borrower, the date taken out

Location Salt Creek Electric Plant

Date Mar 2, 1925

Director of Industrial Relations,
Casper, Wyoming.

Library No. 1 was received at this station today from Salt Creek Home Camps in good order with the following exceptions: (State here exceptions and any shortages in books which may be noted.) No exceptions

Richard Roe
CHIEF CLERK OR SUPERINTENDENT

Figure C

and the date returned, this record being kept on what we call the 'Record of Books Borrowed,' the form marked 'F'. At the end of the two months these 'Records of Books Borrowed' are forwarded to this office and a record of the use is made in our permanent office record, form marked 'D'. This form, you will notice, contains blanks for the number of the book, the title, the author and under the heading of 'Record of Times Borrowed' appear the initials of each of the camps where the books circulate.

"You can very readily see that at the end of the 14 months period which is required for circulating the seven libraries we will have through this record system a complete history of the reading of each volume and not only the number of times read, but the number of times read by each camp. In this way we are able to keep a close supervision over the character of the books mostly desired in each camp and are, thereby, further enabled to make intelligent purchases of new books.

BOOK RECORD. LIBRARY No. 2

No.	TITLE OF BOOK	AUTHOR	RECORD OF TIMES BORROWED							REMARKS
			S.C.E.P.	S.C.G.P.	S.C.	G.C.	E.B.	S.C.P.L.		
400	The Covered Wagon	Hough	2	3	5	9	3	6		
450	Seamanship	Sutcliffe	4	1	6	4	3	2		

Figure D

Midwest Traveling Library
Department of Industrial Relations

RECORD OF BOOKS BORROWED

Library No. 2 Location Salt Creek Home Camp

No. of Book	Name of Borrower	Date Taken Out	Date Returned	Fines
400	Peter Jones	February 20	Feb 27	

Figure F

MIDWEST TRAVELING LIBRARY

MOVEMENT RECORD

Library No. 1

Sent From Salt Creek Home Camp To Salt Creek Electric Plant On March 1, 1925

Received by Salt Creek Electric Plant On March 2, 1925

Sent From ____ To ____ On ____

Received by ____ On ____

Sent From ____ To ____ On ____

Received by ____ On ____

Sent From ____ To ____ On ____

Received by ____ On ____

Sent From ____ To ____ On ____

Received by ____ On ____

Sent From ____ To ____ On ____

Received by ____ On ____

Sent From ____ To ____ On ____

Received by ____ On ____

Figure E

"The form marked 'E' is kept in this office as a 'movement record.' On this record are entered the dates which are obtained from the forms marked 'B' and 'C'. At the end of the 14 months period when the books have made the rounds of all camps, the cases are sent directly to this office and new books are put in and the cases then sent out on a new journey.

"A slip like the form marked 'A' is pasted in the front of each book. This slip contains, as you will note, the library number of the book and the rules for usage."

In the purchase of new books for the traveling library system effort is made to get about 75 per cent of current fiction of the best nature and the balance of the purchase is divided up so as to include history, travel, biography and

The Formation of Oil Field Emulsions

Water should be separated from oil at earliest possible moment to prevent emulsification in handling

By D. B. Dow

THE appearance of water in an oil field is the forerunner of various difficulties, and probably represents the greatest technical problem that the producer must face. Water conditions bear directly on the quantity of oil recovered, and the length of the life of a field. Presence of water increases the cost of operation, for example, lifting costs. On account of the corrosive action of oil field waters on pumps and other equipment, frequent replacement of equipment is necessary. Furthermore, water may affect the marketability of the oil produced, as detrimental emulsions of water in oil ("B. S.", "cut oil", etc.) are often formed.

The writer has recently completed a study of oil field emulsions. The present paper deals with the factors responsible for the formation of emulsions. This will be followed by another dealing with methods now utilized for dehydrating oil field emulsions, and by a third dealing with the physical chemistry involved in the formation and resolution of such emulsions.

Amount of Emulsion Produced in U. S.

Accurate statistics of the total production of oil that is unmarketable because of emulsified water are not available. The compilation of such statistics is difficult, because there is no definite line of demarkation between emulsions that break down on standing and those that require treatment. Frequently, oil from the same wells varies from one extreme to the other with changes in the operating conditions and atmospheric temperatures. The nature and amount of emulsion formed in any particular field is variable. It may range in some wells from traces that can be detected only by careful testing, to other wells producing a light yellow oil that is all emulsified and contains no free oil. A large proportion of the oil containing emulsified water is resolved on the lease by simple methods of treatment, such as heating and gravity settling, and no record is kept of the quantity of emulsion produced or of the unresolved emulsion that may have been drained out of the tanks into open sumps. However, from figures obtainable it appears that at least 20 per cent of the oil produced in the Mid-Continent and Gulf Coast fields requires treatment before marketing. In California fields more than 10 per cent of the oil produced is treated by one process alone. Hence, it will be seen that the problem is of prime importance to the producer.

Extent of Emulsion Problem in Various Fields

In any well that produces with the oil, whether the water comes from the oil sand or from sands above or below the producing sand, there is a potential condition for the formation of emulsions. It is evident that only in wells where no water is produced is emulsification impossible.

Water is present, at least in some of the wells, in practically every producing field in the United States, but there are other factors present which influence the character and amount of emulsion is produced and treatment is vania, West Virginia, Southeastern Ohio and Eastern Kentucky produce only small amounts of emulsion, which readily separates into oil and free water. Hence, in these localities emulsion is not an important problem. In the Lima, Ohio, district, the Illinois and the Western Kentucky fields, more emulsion is produced and treatment, is usually necessary to separate the water. In practically all of the producing fields in Kansas, the problem is of prime importance. In those of Oklahoma, aside from the several light oil districts, the percentage of "cut oil" produced with the crude is large. In the Arkansas fields the emulsion problem is greater than in almost any other locality. In Texas, conditions vary from large percentages of badly "cut oil" in the Gulf Coast region to small percentages in the North Texas light oil fields; conditions in the Mexia, Currie and Powell fields fall between the two extremes. Emulsion problems in the Louisiana fields are much the same as those encountered in Texas and Oklahoma.

Emulsions are troublesome in practically all of the California fields, but the extent of the trouble varies widely according to the character of the crude. The heavy oil of the Casmalia district forms an extremely stubborn emulsion, while some of the light oils of the Los Angeles Basin do not emulsify badly. In Wyoming and Montana (except in certain fields which produce so-called "black oil") the emulsion problem is not at present so serious as in some other states, probably because the fields produce only small amounts of water at the present time, and the product is chiefly light oil. As the fields in these two states grow older the problem will undoubtedly become much more serious.

Water in Crude Oil

Water and crude oil are generally considered immiscible. In a pure mineral oil, such as insulating oil, the solubility of water is estimated at 0.0003 per cent; in crude oils, however, it is possible to have water in seeming solution in much larger quantities.

Usually, however, water in crude oil is present as finely divided particles rather than in solution, and rarely, if ever, in chemical combination. Since crude oil is in general lighter than water, mixtures of oil and water tend to separate into two distinct layers upon standing. However, oil is frequently quite viscous and offers marked resistance to the subsidence of drops of water, which may have been suspended in the oil by mechanical agitation. If suspended water exists in very small droplets, and if certain other conditions exist, the water is said to be emulsified. Bancroft[2] in discussing emulsions says: "An emulsion consists of drops of one liquid suspended in another liquid. When these drops are stabilized by an electric charge they behave like other colloidal solutions of the same type. In most cases there is an actual film around the globules and this keeps them from coalescing. * * * The necessary condition for forming a stable emulsion is that the drops shall be so small that there shall be a sufficiently viscous film around each drop to keep the drops from coalescing."

Thus water may be carried in crude

(Continued on page 41)

[1]Petroleum engineer, Bureau of Mines, Department of the Interior.

[2]Bancroft, W. D., Applied Colloid Chemistry, 1921, p. 261.

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technical books of particular interest to the oil industry.

The exact figures for 1924 on the Midwest traveling library system is not yet available but in 1923 the books were read about 4400 times during the fourteen months period with the loss as mentioned in an earlier paragraph which is very low.

Says Mr. Sinclair further: "Our men take a great deal of interest in this plan and when a library is delayed for any reason in getting a location we hear of it through complaints of the men and inquiries as to when a new library is coming. We are convinced that the system is an excellent one and our method of handling with the forms shown herewith has proven very satisfactory."

CAN BE USED IN ANY HOLE

Drilled in the Oil Country

HINDERLITER PATENTED ECCENTRIC COMBINATION SOCKET

A Good Thing for the N. G. Ass'n of A. to Know!

HINDERLITER TOOL COMPANY

"The Biggest Little Tool Company in the Oil Country"

TULSA, OKLAHOMA

Manufacturers of and Specialists in Drilling and Fishing Tools

HINDERLITER

Say you saw it in The Oil Weekly

EDITORIAL PAGE

More Government Child-Play

TANKS erected for the storage of fuel oil at Pearl Harbor for the Pacific fleet are deteriorating rapidly because of non-use.

These are the tanks which were erected under the Doheny-Elk Hills contract which is in litigation, and failure to use and thus protect the property is blocked by orders of the special counsel employed by the government to prosecute the suits seeking to cancel the oil leases which were the subject of the senate's sensational investigation.

The navy department is quite willing to make use of the tanks and it has been suggested by attorneys representing the defendants that they be used. But to prevent possible legal tangles through such uses, the special counsel for the government instructs that the government shall ignore the existence of the tanks.

We would not question the wisdom of this move from the point of prejudice in the case before the court. The learned counsel for the government certainly should know what is proper to be done in such matters in so far as their client is concerned.

But it certainly does appear that the lack of centralized responsibility in this government of ours is responsible for some peculiar inconsistencies.

While another "special" branch of the government is functioning under the direction of the President to accuse the oil industry of flagrant waste, another specially appointed authority is giving us an example of wantoness that would be hardly excusable even were not the property rights of private citizens involved.

It has been intimated that possibly the government will legislate in some way to prevent wasteful practices in the exploitation of petroleum by private interests, should the results of the current investigation on conservation seem to justify. The department of commerce is engaged in a laudable campaign to eliminate waste throughout industry through the standardization of materials and practices.

All of this is quite laudable.

But the record, particularly as regards the navy, and now as represented by attorneys presumed to be concerned with protecting the economic interests of the navy, puts the government in the position of a very grimy kettle when it directs attention to the oil industry's black pot.

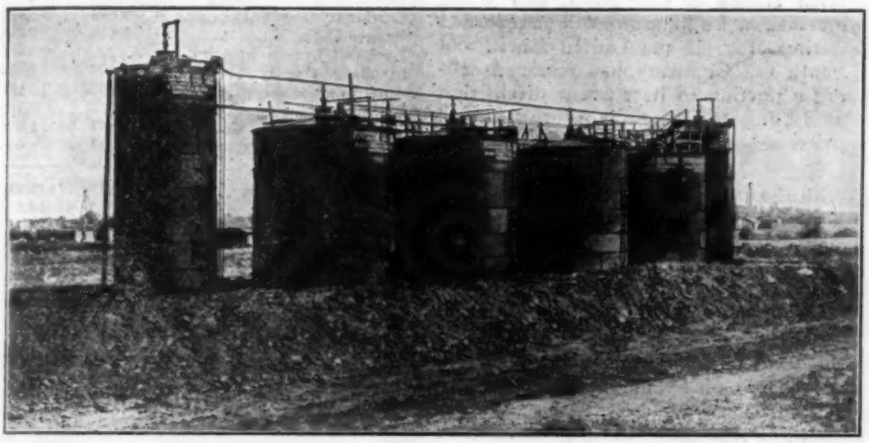
Destruction by the government of obsolete equipment has heretofore been sufficient, in our opinion, to soil its hands as a critic of wastefulness in the oil industry or elsewhere. But now that its waste is being extended to immediate contact with the oil industry, the action of the several branches of the government interesting themselves with the oil industry, certainly show some inconsistencies.

The record that the learned counsel for the government made in the one case tried would leave some room for doubt as to whether the government is not concerned over the preservation of the tanks in Honolulu. It appears entirely possible that the tanks in question will be the property of the United States navy. And even if they are to be thrown back upon the Doheny interests, the government should be willing that they be preserved, in view of the fact that much of the talk of conserving has been in the interest of the citizenship of the country as individuals. The interests which built those tanks are American nationals whether or not the contracts were legally drawn. Refusal to protect the the property because of the possibility of prejudicing the government's case is as much a reflection upon the ability of the learned counsel to make binding agreements to cover the contingency as it is a wanton destruction of valuable properties which might be conserved with little or no cost.

The OIL WEEKLY wants only such subscribers as are engaged in the oil producing or pipe line business or sub-branches of the producing and pipe line business. It has no desire for investor circulation, and it reserves the right and will exercise the right to reject subscriptions coming from persons whose interest in the oil industry is through the purchase of oil stock.

R. L. DUDLEY, Publisher.

PERFECTION VAPOR PRESSURE TANKS
WOOD, AND BOLTED STEEL TANKS



This Burbank operator has a complete Perfection Vapor Pressure battery which pays him annually thousands of dollars otherwise lost from the ravages of evaporation.

How Big the Saving With Perfection Vapor Pressure Tanks?

A PERFECTLY logical question and one we are glad to answer.

The saving will vary in every field, depending on the weather, temperature, cloudiness, size of tanks and gravity of the crude.

We have one customer who declares in an unsolicited letter that his Perfection Vapor Pressure battery will pay for itself every month!

A superintendent for the Sinclair Oil and Gas Company who more than two years ago recommended that Perfection Vapor Pressure tanks be substituted for the stock tanks then in use at Garber, Okla., estimated the entire 123 would save $12,000 a month for his company.

Furthermore the figures did not include profits from use of our Perfection Vapor Pressure flow tanks used as gas separators where gas is saved for fuel or made available for sale to the nearest gasoline plant.

In any case you will find on investigation that the installation of a Perfection Vapor Pressure battery will be the best investment in oil field equipment you ever made.

Perfection Vapor Pressure Tanks—An Investment Instead of an Expense

Black Sivalls & Bryson
·INC·

BARTLESVILLE ~ OKLAHOMA

Branch offices in all principal active fields

Magnolia Crude Runs on Up-Turn During April; Has Been Drawing on Storage

Dallas, Texas.—Magnolia Petroleum Company checked its declining crude runs from various fields in Oklahoma, Kansas, Texas, Arkansas and Louisiana during April after experiencing a continuous loss for four months. The combined daily average crude runs from the above five states amounted to 56,509 barrels, or 3244 barrels greater than the daily average maintained during March, which was the lowest level Magnolia's runs have declined to in several years. The slight gain during April was largely realized through increased crude purchases and production in the Wewoka-Cromwell district, Oklahoma, by the completion and operation of new pipe lines in Archer County and the Lockhart-Lytton Springs high gravity fields in Texas.

Withdrawal of crude from reserve stocks in Oklahoma and Texas by Magnolia has been necessary for the past five months owing to runs being less than current refinery needs, and further inroads on crude stocks will be made by Magnolia for the next few months to fill its heavy gasoline orders during the summer motoring season, as no appreciable volume of new production is within sight in the district served by Magnolia's pipe line system. Crude stocks in Oklahoma and Kansas have been reduced 1,593,247 barrels, or drawn on at the rate of 318,649 barrels monthly since last November when a peak level of 9,574,125 barrels was held in steel tanks in these two states by Magnolia. The withdrawal of Oklahoma-Kansas stocks during April amounted to 351,492 barrels, leaving 7,980,878 barrels on hand at the close of April. Crude stocks held by Magnolia in North and Central West Texas fields amounted to 2,477,373 barrels at the close of April, or 63,133 barrels less than the total reported on month previous, and 288,922 barrels under the total reported five months ago.

The completion of new wells and increased crude purchases made by Magnolia during April in the Wewoka-Cromwell district in Oklahoma accounted for a gain of 73,123 barrels in the total runs. Except for a slight gain in daily runs from the Cushing field, Magnolia's runs from all other fields in Oklahoma and Kansas fields remained normal. In Texas, Magnolia made its first crude runs from the Lockhart-Lytton Springs field during April, and purchased 19,425 barrels before the close of the month. This crude commands a posted price of $2 per barrel, and is being moved by Magnolia via a 5-inch line to storage tanks near Luling, where it will be transported later in batches through Magnolia's Luling-Beaumont 8-inch line. Magnolia's total runs from the Luling field, which is low gravity oil area, amounted to only 80,616 barrels during April, but the line was kept operating at capacity in reducing accumulated stocks at this point, and a big increase in Luling runs will be recorded during May, as the United North and South Oil Company has resumed selling a portion of its current production at Luling to Magnolia at the posted price.

Since Magnolia is not connected with the Louisiana-Arkansas fields with a pipe line, its crude supply from these two states is almost entirely confined to controlled production. However, Magnolia holds considerable crude stocks at Smackover in steel tanks that was produced and purchased during the first boom at Smackover, and is moving in materials for about ten additional 55,000-barrel tanks to buy more of this heavy oil if obtainable.

Water shipments of refined oils (gasoline, kerosene and lubes) made by Magnolia during April amounted to 32,378,784 gallons, or almost the same as reported during March, while water shipments of fuel oil gained slightly more than two million gallons during April. Magnolia has more fuel oil available now by reason of using natural gas almost exclusively to fire the stills and boilers at its Beaumont refinery, and this change in fuel affords a saving of more than 7000 barrels of fuel oil daily. Magnolia is cracking a greater percentage of its fuel oil down to coke, since the introduction of the natural gas last February, and is moving in materials to construct 10 units of the Cross cracking process to operate in conjunction with its Burton cracking units. A continued curtailment of water shipments of crude is being enforced by Magnolia since the decline of crude runs from the Mid-Continent district, and only two small tankers were loaded during April. Water shipments made from the Beaumont terminals to the Atlantic Coast and foreign countries during the past four months follows:

	Fuel Oil (Gals.)	Refined Oils (Gals.)	Crude (Bbls.)
January	28,317,913	19,598,858	75,871
February	15,449,742	18,984,883	....
March	19,425,944	32,355,649	121,145
April	21,592,332	32,378,784	95,724

Magnolia's crude runs for March and April follow:

Fields—	March Totals in bbls.	April Totals in bbls.
Wewoka-Cromwell	194,173	267,296
Healdton	203,219	194,623
Cushing	143,726	151,201
Burbank	101,613	95,791
Hewitt-Graham	98,882	88,493
Duncan	61,215	54,071
Yale	53,184	50,408
Augusta	35,532	34,239
Cement	23,891	21,709
Walters-Beaver Creek	9,112	9,222
Bristow	362	185
Totals for Okla. and Kans.	924,909	967,238
Electra-Burkburnett	217,217	212,865
Mexia-Wortham	98,237	95,146
Luling	108,582	80,616
Mirando	64,304	72,237
Archer County	21,486	43,157
Desdemona-Comanche	37,983	35,273
Corsicana-Powell	26,043	23,960
Ranger-Olden	23,618	23,299
Lockhart-Lytton Springs	.....	19,425
Stephens County	26,134	18,589
Corsicana (Heavy)	11,298	10,167
Petrolia-Clay County	5,218	9,569
Thrall-Williamson County	1,651	1,051
Coleman County	641	456
Totals for Texas	642,412	645,810
Totals for Arkansas	57,858	58,077
Totals for Louisiana	26,047	24,155
Grand total for 5 states	1,651,226	1,695,280

H. D. Parker Made Manager Robinson Packer Company

Tulsa, Okla., May 8.—H. D. Parker has been named general manager of the Robinson Packer Company of Tulsa, succeeding W. G. Long, whose resignation as treasurer and general manager was accepted at a directors meeting April 30. O. K. Eysenbach of Tulsa continues as president of the company.

Mr. Parker is well known in the supply trade and has been general manager of the Robinson Packer Company factory at Coffeyville, Kan. Arthur H. Craver of Tulsa has been elected treasurer of the Robinson Packer Company and H. R. Vreeland, who has been associated with the company for some time continues as assistant treasurer. H. L. Kime, also of Tulsa and an old employe of the company, has been added to the board of directors.

Employes of the company have absorbed the stock interests held by Mr. Long, who is leaving for an extended vacation at Hot Springs, Ark.

The Robinson Packer Company is one of the oldest companies in the Mid-Continent field and manufactures the red packer and limit plug as well as other oil field products. The company maintains a branch store at Blackwell, Oklahoma.

H. D. PARKER

A List of Lunkenheimer Products

available at Lunkenheimer Distributors, located in all commercial centers. They can render prompt service right from stock.

VALVES

Bronze, Iron, Steel; Globe, Angle, Cross, Check, Gate, Throttle, Non-return, Blow-off, Pop Safety, Relief, Whistle, etc.

BOILER MOUNTINGS

Non-return, Pop Safety and Blow-off Valves; Water Columns, Water Gauges and Gauge Cocks, Low Water Alarms, Fusible Plugs.

LUBRICATORS

For Steam, Gas, Gasoline, Oil, Compressor and Pump Cylinders; Gravity Feed or Hydrostatic; Hand or Mechanically Operated.

OIL AND GREASE CUPS

Glass or Bronze Body Oil Cups; Automatic Feed, Cap or Plunger Screw Feed Grease Cups of Bronze, Iron or Steel. Whistles, Cocks, Pipe Fittings, Unions, Air Nozzles, Etc.

Ask the Lunkenheimer Distributor in your locality for a free copy of the "Guide to Better Service." The "Guide" makes it easy for you to choose the right Valves, Boiler Mountings, Oiling Devices, Whistles, Cocks, etc., for your individual requirements. The center pages illustrate the application of Lunkenheimer Boiler Mountings conforming to the A. S. M. E. Code. It's a handy book and you'll be glad to have a copy. If the distributor can't supply you, fill in and mail coupon; the "Guide" will be sent by return mail.

Please send me copy of Lunkenheimer "Guide to Better Service".

Name .....

Firm .....

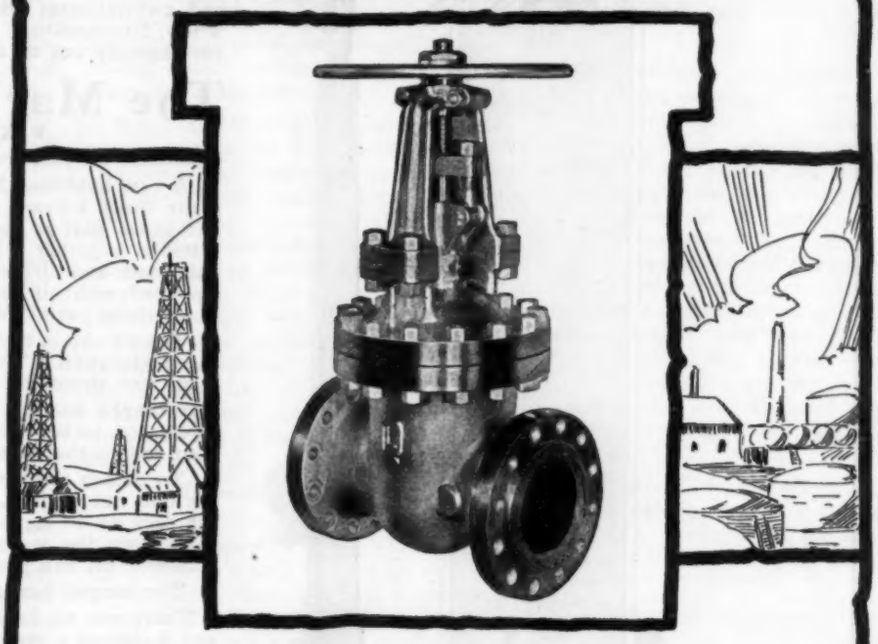
Address .....

YOU'RE BEST BET!

FOR HIGH PRESSURE SERVICE IN THE PETROLEUM INDUSTRY

LUNKENHEIMER

STEEL VALVES



Lunkenheimer Steel Gate Valve

Steel or Monel Mounted.

Once installed, Lunkenheimer Valves stay on the job.

Their sturdy construction and many distinctive features appeal to the man responsible for maintaining economical production. Freedom from costly delays due to frequent repairs and replacements insures maximum service with minimum maintenance expense.

Renewability of all parts, including seats and disc, materially prolongs the life of the valve. Complete information will be sent on request.

THE LUNKENHEIMER CO.

"QUALITY"

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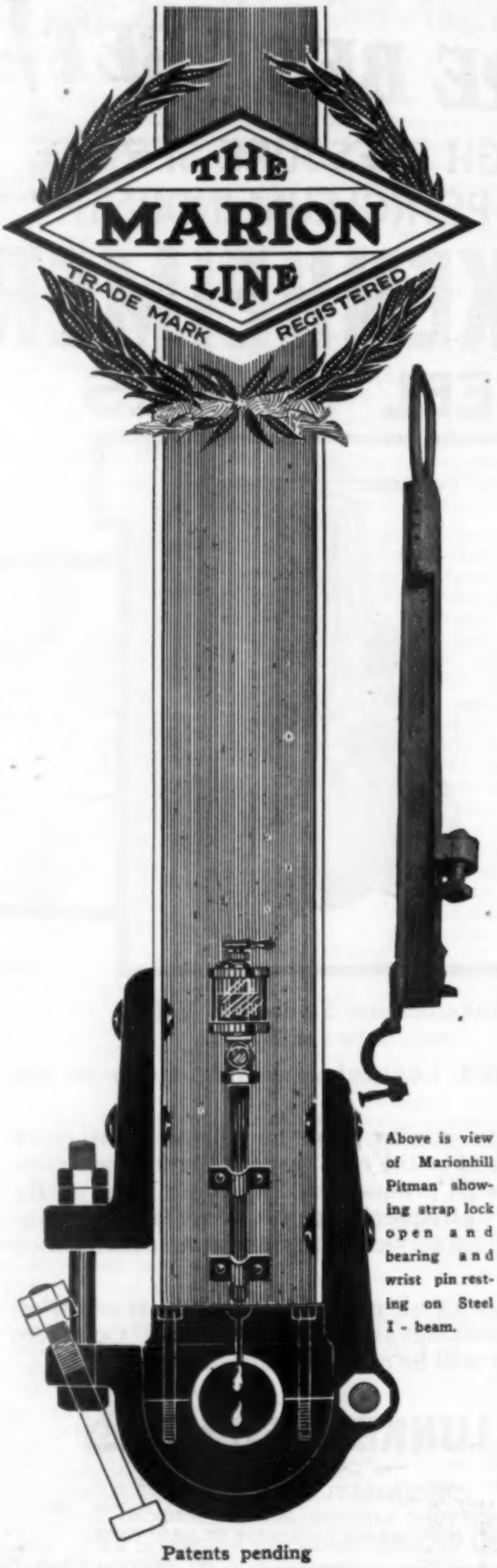

Above is view of Marionhill Pitman showing strap lock open and bearing and wrist pin resting on Steel I - beam.

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In Pitman Construction

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The Marionhill Pitman

PATENT PENDING

eliminates all this trouble—

A cast babbitted box is stationary on the wrist pin —the Steel I-Beam butting against this; both upper and lower part of box is semi-steel and the parts are fastened together with cap screws. This bearing is babbitted and drilled to permit free oiling, and is equipped with oil cup. Bearing remains on wrist pin at all times permitting perfect, permanent adjustment.

The oil cup is fastened to the I-beam directly above the perforation. This method of oiling insures constant and thorough lubrication.

A hinged bearing lock, riveted to the I-beam with rivets and locked with a bolt securely fastens the pitman rod to the wrist pin.

To detach the pitman it is only necessary to loosen the bolt nut slightly. This will allow the hinged bearing lock to swing back, completely releasing the pitman from the wrist pin, without any strain or pull whatever on any part of the equipment.

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Mid-Continent Gravity Basis and Prices Adopted by Mountain States Purchasers

Casper, Wyo., May 11.—All crude produced from the Salt Creek field in the future will be handled by the purchasing companies on a strictly gravity basis, something never attempted in the past. This decision recently was reached by the dominating companies after the subject of temperatures, gravity and artificially heating the oil had caused differences to arise as to how the crude really should be handled. The gravity classification was borrowed from the Mid-Continent producers and the prices received by the producers also will be the same. Oil from 33 to 35.9 gravity is to bring $1.80; 36 to 38.9 gravity, $2.00, and 39 to 41.9 gravity, $2.25. Approximately 95 per cent of all the oil produced in the field falls under the intermediate gravity rating. A small amount of the oil will be classed below 36 gravity, while a very little, particularly the oil from the shale wells, will command $2.25, the highest price attained in the field since the early part of 1921. Both the producers and purchasers of crude in the field have been very lenient in the past in acquiring or disposing of the oil. Temperatures and gravity scarcely have been mentioned. Recently the government expressed itself as in favor of correcting the temperatures of the oil to 60 degrees Fahrenheit, but met some opposition in carrying out the plan. The producers are desirous of having the temperature correction made to 64 degrees.

While drilling for oil on a farm owned by F. McManigal, near Thermopolis, Wyoming, a flow of hot mineral water was encountered at about 500 feet. No further attempt will be made to continue the well. The flow is estimated at 75,000 barrels daily and the water will be used commercially, being near Thermopolis, which is a resort.

Teapot Briefs Filed

An early decision in the Teapot Dome case is expected since both the government and the Mammoth Oil Company have filed briefs as required. The brief filed by the defendants is a massive affair, containing more than 200 pages and is bound in book form. Nine persons signed the brief for the Mammoth Oil Company, which is one of the longest ever recorded in Wyoming courts.

The Kasoming Oil Company, drilling a deep test on section 15-40-79, Salt Creek field, found the Lakota formation crumbled and free from oil. Hot water was encountered, however, but this will be cased off in an effort to reach the Sundance formation. The Midwest Refining Company, alone, has found the Lakota formation productive in the Salt Creek field.

As the result of the large wells completed in Montana, and the steady number of producers added in the Salt Creek field during April, initial production during the past month was more than 5,000 barrels more during the month of March. New production in Montana 6250 barrels, only a fraction short of the new production for all of the state of Wyoming, which yielded 6430 barrels. In almost every phase of the summary, April exceeded March in developments. Rigs up ready to drill were more numerous at the end of April by 17 than at the close of March. More wells were drilling by two and the total number of April completions was 10 more than for March, when 74 wells were completed. An encouraging feature was the fact that although the April completions exceeded those for March, there were fewer dry holes completed.

The Texas Production Company has acquired from the Kinney-Coastal Oil Company four producing tracts in the Salt Creek field, paying about $360,000 for a one-half interest in the leases. The Texas interests already owned one-half interest in the leases but were very desirous of acquiring additional production for its refinery at Casper. This will give the company about 300 barrels of additional oil. This oil, with the oil now free to come from Colorado, will greatly relieve the awkward situation The Texas Company recently faced.

From Madison Lime

It has been definitely decided that the large production of the Queen City Oil Company's well, located on section 4-34-2, Kevin-Sunburst field, is coming from the Madison lime, which lies immediately below the Illis sand. This well is now making more than 2500 barrels daily and is said to be the first well to be productive from this horizon. A circle of offset wells will be drilled immediately by any of the operators who are fortunate enough to be located nearby.

A large number of wells are being drilled in Colorado, but due to the depth of production and the difficult formations usually encountered completions thus far have been disappointing. Thirty-three wells are actively drilling in the state but production in most of these is expected in comparatively deep formations. The Union Oil Company of California is drilling 13 wells. The various water formations usually encountered tend to retard completions of new wells. In some locations the bench formations are very tricky. In many cases, particularly the Iles dome, the objective sands have been reached, only to be found either dry or broken up. Colorado holds considerable promise as a future producer but the cost of drilling is probably higher than in the average state.

Montana Branch Mountain O. and G. Assn. Organized

Great Falls, Mont.—Organization of the Montana branch of the Rocky Montana Oil and Gas Association was accomplished at a meeting held here May 9 that was attended by representatives from oil and supply companies from this state as well as from Wyoming and Colorado.

A. Judson Findley of the Western Petroleum Exploration Company is president of the Montana branch and A. D. Becker has been elected treasurer. Permanent headquarters of the new association has been located at 222 Ford Building in Great Falls and Walter F. Brittan has been named secretary. This is the only paid official in the organization.

Vice presidents representing each branch of the petroleum industry were elected as follows: J. H. Clark of the Mid-Northern Oil Company and E. B. Coolidge of the Homestake Oil Company represent the producing branch, A. E. O'Brien of the Lewistown Refining Company and M. C. Henderson of the Sunburst Refining Company and L. B. O'Neil of the International Refining Company represent the refining branch, Thomas Arthur of the Continental Oil Company, H. Earl Clack of the H. Earl Clack Company and C. H. Brown of the Arro Oil and Refining Company represent the distributing branch.

As a special representative of the publicity department of the Montana branch O. I. DeSchon of the Montana Oil Journal has been named a vice president.

The executive committee of the organization consists of H. Earl Clack, O. I. DeShon, C. H. Brown, M. C. Henderson, Thomas Arthur and E. A. O'Brien. The executive committee will meet in special session in Great Falls May 16.

The parent organization of the Rocky Mountain Oil and Gas Association at Casper was represented at the Great Falls meeting by Mark O. Danford of the Midwest Refining Company and A. M. Gee of the Ohio Oil Company. The latter delivered the principal address of the meeting, the subject being "Co-Ordination of All Branches of the Oil Industry." Other speakers at the meeting included C. H. Brown, E. B. Coolidge, C. W. Bunton, Don Campbell, H. Earl Clack and A. J. Findley.

In all about 50 were in attendance. The by-laws and constitution of the Montana branch were subscribed to by these and it is planned to hold meetings at least quarterly during the year. The annual meeting of the Montana branch will be held in Great Falls on the Friday and Saturday immediately preceding Thanksgiving.

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Say you saw it in The Oil Weekly

The Formation of Oil Field Emulsions

(Continued from page 30)

oil mechanically in two different forms, (1) as a true emulsion, where drops microscopic in size are covered with a protective film of oil that prevents aggregation, and (2) where the drops of water are much larger and remain in suspension primarily due to the viscosity of the crude. In a true emulsion, no separation of free water can be obtained unless the protective coatings around the drops of water are ruptured. In the second case, the water will eventually separate from the oil by virtue of the difference in specific gravities of the two liquids. Crude oil frequently carries water in both conditions.

"Cut Oil"

When water is present in producing wells mechanical agitation of any kind is apt to disperse small particles of the water entirely throughout the body of the oil. As a result, the oil generally contains water both in emulsion and in suspension, this mixture being called "cut oil." The term "cut oil" where used in this paper refers to such mixtures.

When "cut oil" is permitted to stand quietly in a tank the free water tends to settle to the bottom, and the true emulsion to concentrate as a layer between the free water and the oil.

The layer of concentrated emulsion is in field practice called "B. S.", a term long in use, originally identified with waxy settlings from Pennsylvania oils, which were called "bottom settlings" or "basic sediment." The term "B. S." was later applied to the emulsion that settled to the bottom of tanks in fields where permanent emulsions were produced. This term is broad in meaning and covers not only the actual emulsion that settles out, but also includes any foreign material which may separate, such as sand and silt, also any waxy material which is precipitated when some oils are cooled.

Formation of "Cut Oil"

Inasmuch as water is responsible for the formation of emulsions, it is evident that all wells which show "cut oil" are producing some water. The water may be coming from any of several sources, its origin making no difference in respect to the nature and amount of emulsion produced. However, if the source of the water is known, it is frequently possible to effect a shut-off, thereby excluding it from the well.

After water has entered a well, agitation with the oil causes emulsification, the extent and nature of emulsification depending upon the degree of agitation and the characteristics of the oil. If a permanent emulsion is produced the agitation must have been sufficient to break the water up into microscopic droplets, colloidal in size and properties. It is frequently stated that emulsions are produced in the sand before the oil enters the hole, and certain cases are cited as proof. For example, a hole may be bailed dry and allowed to remain undisturbed for a short period of time. Upon being bailed again, it may be found that instead of free oil and water in the hole, "cut oil" will be found, indicating that "cutting" took place before the fluids reached the hole. It seems more probable, however, that the cutting took place on the surface of the sand, just at the point of entrance of the oil and water, and did not extend further than a fraction of an inch back of the surface.

If oil and water are forced through a small orifice at a high velocity, the violent agitation resulting produces a very stable emulsion. In an oil well, undoubtedly the water, oil and gas pass through the sand at the greatest velocity just as they enter the hole. The viscosity of an emulsion is many times greater than that of either oil or water alone. In laboratory experiments it was found that a pressure of 1000 pounds was required to force an ordinary emulsion through a layer of 200-mesh sand, half an inch thick. Furthermore, the sand acted as a filter and showed a tendency to break down the emulsion rather than to form one. From these indications it appears that no emulsion would ever come into the hole if formed at any great distance back in the sand. A possible exception is where crevices or cracks are present, through which water and oil may be moving rapidly due to high gas pressure.

Generally emulsification takes place at some later stage, either in the hole, the tubing, or even in the flow lines above the ground. Whether emulsification takes place in the well depends largely on the method of production. Wells flowing naturally or by air lift, offer in general a different set of conditions than in those where the oil is being produced by mechanical appliances, such as bailing, swabbing and pumping. These differences are probably due to the varying degree of agitation caused by the different methods of production. Another condition affecting emulsification is the relative proportions of oil and water produced in the well. If the proportion of water is below a certain minimum which varies with other conditions, all of the water tends to emulsify, but if the water percentage is above this point, much less emulsion is formed, which results in the production of free water and oil containing smaller amounts of B. S. This condition has been observed in many fields and, while seemingly is hard to explain, it is in fact characteristic of the formation of many commercial emulsions such as pharmaceutical preparations and the like. Stirling[3] in describing a condition in Baku, where stubborn emulsions were formed when the water content was between 5 and 20 per cent, overcame the difficulty by running enough water into the well to raise the percentage of total water to 20 per cent.

In the Lima, Ind., field sand produced with the oil cuts the cups badly and a very stubborn B. S. is formed. Several methods of prevention were tried, and it was finally found that the difficulty could be overcome by adding about 10 barrels of cold salt water.

Flowing Wells

In the early life of wells in many fields, the wells flow naturally without the aid of mechanical lifting appliances. These wells flow because large volumes of high pressure gas accompany the oil, or because water under high pressure transmits the pressure to the body of the oil. Wells flowing under gas pressure are most interesting as regards emulsification.

In flowing wells producing oil and water by means of gas pressure, the agitation is very great because of the gas bubbles rising through the oil and water, and the dissolved gas coming out of solution as the pressure drops. The last mentioned factor supports the contention that the greatest part of the cutting takes place at the flow nipple. The most sudden pressure drop in the passage of the fluid takes place at this point, with the consequent formation of large quantities of gas that give an almost explosive agitation.

T. E. Swigart[4], formerly of the Bureau of Mines, cited to the writer two cases bearing directly on the subject of emulsification due to flowing by gas. In one case in the Slick field, Oklahoma, a flowing well was producing badly cut oil. After a 3-inch tubing and working barrel were installed it was found possible to produce oil both by pumping and flowing. The oil delivered from the pump was practically free from emulsified water, whereas the oil produced from the casing around the tubing continued to flow badly cut oil. The second example was of a well in the east pool of the West Columbia, Texas, field, where oil pumped through the tubing was not cut, but the oil flowing intermittently in the casing around the tubing was badly emulsified.

Efforts have been made in Arkansas,

(Continued on page 48.)

[3]Stirling, R., The air-lift system of raising oil; Jour. Inst. Petroleum Technologists, October, 1920, Vol. 6, No. 34, p. 382.

[4]Swigart, T. E., Personal communication.

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The Limit Plug will plug the hole and shut off the water when drilled too deep. This article is the talk of the oil country.

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New Developments in the Use of Gas Lift

Experience in California wells is that gas is more efficient without objections of air

By R. P. McLaughlin

THE most certain and economical method of producing oil at wells which have recently ceased to flow is the method which takes advantage of the high rock pressure and removes the oil as fast as it enters the well. If removal of the oil is delayed until the time of high rock pressure has passed it is doubtful whether the oil will ever be fully recovered. The need of conserving or recovering all the oil possible is now thoroughly recognized as a national necessity and furthermore the most efficient means of recovery means added profit to the producer. The gas lift is coming into use and promises to perform a very necessary function at many oil fields.

There is a comparatively long period of time following the cessation of natural well flow and preceding the stage of final exhaustion during which oil has ordinarily been recovered only by pumping methods. This very important phase of underground conditions is beginning to be investigated and present results indicate that the application of compressed gas will hereafter supplement the mechanical operations of pumps.

California Problem

The recently developed fields of California now have many wells which recently ceased flowing, but are still capable of furnishing more oil than can be lifted by any sort of pumping machinery yet developed, notwithstanding the great advances which have recently been made in pumping equipment, most of which aim at long stroke and slow motion. These wells will continue to offer oil in excess of pump capacity so long as the present high rock pressure exists in the oil bearing formations. If the oil now available on account of high rock pressure and consequent high fluid level, is not promptly and completely taken from the wells a large portion of it may remain in the ground indefinitely. It is an axiom in the oil business that wells in virgin territory or along a property line must be completed with the utmost speed. It is equally important to promptly take from a well, which has recently ceased to flow, all the oil that is available in excess of pump capacity. The gas lift effectually performs this service.

The adoption of the gas lift process in California fields has not been as rapid as the facts warrant because of the unsatisfactory results which were obtained with air lifts a number of years ago. Actual demonstration of profitable results is doing much to remove this prejudice and a brief account of the operation is therefore timely.

One of the most successful and convincing demonstrations of the gas lift up to the present time has been made at well No. 1 of the Elliott Consolidated Oil Company, near the western edge of the Santa Fe Springs field. The well was completed at a depth of 4638 feet in February, 1924, and commenced flowing at the rate of 740 barrels per day. Flowing ceased after a few months and when the well was put on the pump its daily production averaged nearly 300 barrels during some five or six months. A gas lift was installed in November, 1924, and immediately raised production to considerably over 600 barrels. Production by the gas lift method has been continuous for five months. At the beginning of the fifth month improvements were made in the power supply and since then the production has been held at about 700 barrels per day. The gasoline output was also increased from an average of 242 gallons per day to 917 gallons. The added net profit to the oil company due to the use of the gas lift in the first 90 days of its operation was over $32,000 and for the five months' period has amounted to about $58,000. The production record of the well is shown in detail by the accompanying diagram.

Well Data

Some of the pertinent operating data at the above mentioned well are as follows:

Depth of well, 4638 feet.

Depth to top of fluid (approximate), 3600 feet.

Amount of perforated casing, 184 feet.

Gravity of oil (when pumped), 34.8 degrees Baume.

Gravity of oil (when lifted by gas), 33.6 degrees Baume.

Amount of oil pumped daily, 290 barrels.

Amount of oil lifted by gas daily 599 barrels.

Amount of gasoline per barrel of oil pumped, .80 gallon.

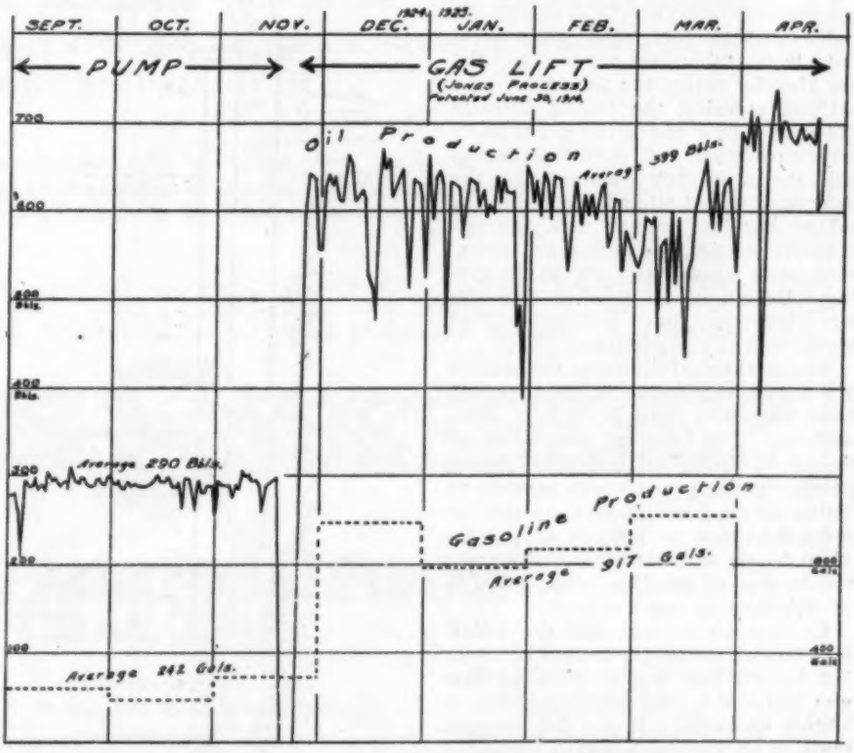
Amount of gasoline per barrel of oil lifted, 1.46 gallons.

Value of oil pumped (34.8 degrees Baume), $1.80 per barrel.

Value of oil lifted (33.6 degress Baume), $1.74 per barrel.

Combined value of oil and gasoline per barrel pumped, $1.90.

Combined value of oil and gasoline per barrel lifted, $1.95.



Record of production oil and gas at well No. 1, Elliott Consolidated Oil Co., Santa Fe Springs, showing comparison of results by pumping and by gas lift.

Increased value per barrel lifted, 5 cents.

Amount of gas introduced into well, 235 cubic feet per barrel of oil.

Amount of gas naturally coming from well, 250 cubic feet per barrel of oil.

Total amount of gas coming from well, 485 cubic feet per barrel of oil.

Pressure at casing head, 350 pounds per square inch.

Pressure in oil trap, .25 pound per square inch.

Temperature of gas into well, 174 degrees Fahrenheit.

Temperature of gas out of well, 86 degrees Fahrenheit.

Gas is compressed by a two stage straight line 8x4¼x8-inch Ingersoll Rand compressor belted to a 40 horsepower Western gas engine.

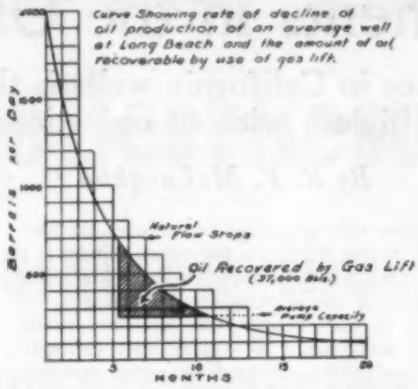
Operation of Lift

The method of operation of the gas lift is indicated by the sketch which shows the well and its connections. The well is capped and connected to a gas trap in about the same manner as is customary at a natural flowing well. Some distance up from the bottom of the tubing there is a specially designed flow device which is not shown in detail in the sketch, but which may be briefly described as a series of perforations in the tubing. The normal fluid level stands nearly a thousand feet above the perforations in the casing and the perforated section of the tubing is also some distance above casing perforations, but far below the normal fluid level. By means of a compressor, gas from which the gasoline has been extracted, is introduced inside the casing and outside of the tubing. As the gas pressure increases the fluid level recedes down the well until the perforations in the tubing are exposed and the gas thereby enters the tubing.

Upon entering the tubing through the special flow device the gas if properly introduced and controlled mixes with the oil in such a manner that the column of mixed oil and gas within the tubing has less weight than the gas pressure outside the tubing and therefore flows upward and out of the tubing. Design of an efficient flow device involves some rather detailed mathematical computations.

The mechanical details of the process are much the same as those which have long been used for lifting water with air. Air, however, was never efficient in lifting oil and the existing patent on the process was granted to Philip Jones, June 30, 1914, on the improvement due to the use of gas instead of air and more especially upon the saving of gasoline made possible by substituting gas for air.

In view of the fact that the Elliott well had an initial production of about 700 barrels and after ceasing to flow was restored to and kept producing at almost its initial rate for five months, there is an unusual problem presented in the general study of the rate of decline of oil well production. If judged

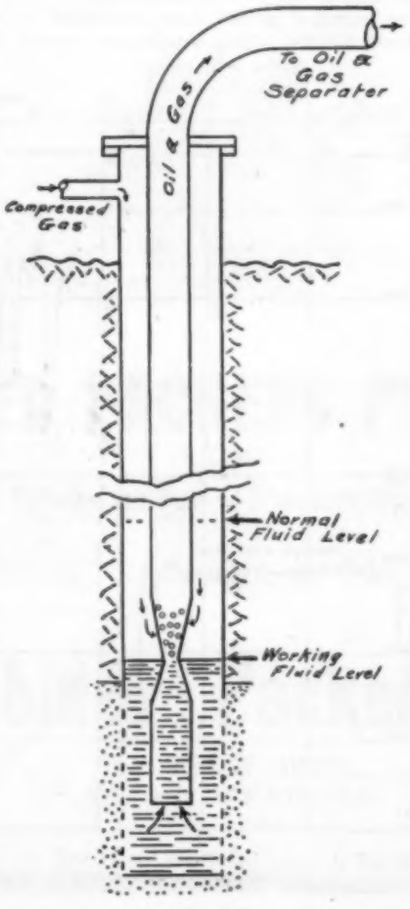

Curve Showing rate of decline of oil production of an average well at Long Beach and the amount of oil recoverable by use of gas lift.
Barrels per day
Natural Flow Stops
Oil Recovered by Gas Lift (37,000 bbls)
Months

by the average behavior of well as shown by production records the well should now be capable of producing only about 250 barrels per day. As a matter of fact the gas lift has produced about 45,000 barrels of oil in excess of the pump capacity and this excess has already been more than twice as large as would have been indicated or expected from a study of decline curves such as shown in the accompanying diagram.

Special Application

It must not be expected that the gas lift will solve all production problems. It is applicable to only a special class of wells and will probably function during only a limited portion of an oil well's life. However, during the

Method of Applying Gas Lift to an Oil Well.



time that the gas lift is in action it will produce more oil than even the most improved type of long stroke pump and will have repaid for itself many times over. All wells must eventually stop producing and when rock pressure falls sufficiently the gas lift will not function efficiently and mechanical pumps will become necessary. As long as the gas lift will function at a well there will be no valve or rod troubles and mechanical difficulties will all be on top of the ground, where repair work is quick and cheap. Loss of time and production in pulling a well to repair pumps is now a large item.

Various theories have been advanced as arguments why the gas lift should not be applied to a well. In the face of actually demonstrated success the theories will hereafter receive but scant attention, but they are at least worth mentioning. It has been frequently stated that the gas lift induces water troubles at a well. This theory probably arises as a mere association of ideas to the effect that compressors and water troubles went hand in hand at some old fields such as Kern River. As a matter of fact the water trouble preceded the use of compressors which were installed for the purpose of disposing of the water. The water was successfully handled for many years, but oil was not successfully lifted, partly because it was of low gravity and did not flow readily like the high grade oil in the recent fields. It is sometimes said that the gas lift will dry out the oil sands. In view of the fact that the compressed gas does not come in contact with the sand there is, of course, no ground for such a theory. The air lift seems to have left an unsavory record as to corrosion of tubing and casing and sometimes these faults are mentioned. Corrosion by air is due to the presence of oxygen which becomes extremely active in conjunction with small amounts of sulphur. As natural gas does not contain oxygen the corrosive agent is not present. In answer to all theories or fears of damage to a well by using the gas lift it is only necessary to point out the fact that the natural conditions prevailing in a well while it is flowing are not viewed with alarm and the gas lift merely continues or duplicates the natural conditions.

There is no chance of injuring a well by testing its behavior under the gas lift. One compressor can be used to test each of the various wells in a group without the expense of moving the machinery from well to well. Only a few days, at the outside a week, will afford ample time to test the effectiveness of the gas lift at a well.

The most efficient results from a gas lift will be obtained only after a careful engineering investigation of all the factors affecting the well in question. It is therefore impossible in a short article to give answers to all the questions which will arise. There have already been several unsuccessful attempts to use the process without prop-

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No. 1 Smith Oil and Gas Separator
O'Brien & Meadows Lease,
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O'Brien and Meadows drilled in well on their lease near Mounds, Oklahoma, making a large amount of gas and small spray of oil which came from the well in vapor form. They were unable to reclaim any of the oil with the facilities they had on the lease, it being wasted in the air with the gas from the tanks.

The above photograph shows Type No. 1 SMITH OIL AND GAS SEPARATOR, which they installed on their property and as soon as well was turned through the separator they secured 80 barrels per day of high gravity crude, in addition to having dry gas for use as fuel, and eliminating their fire hazard.

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SMITH SEPARATORS not only place crude in the stock tanks at the highest possible gravity and supply free gas for fuel, or the manufacture of natural gasoline, but also eliminate fire hazard.

Our representatives in all fields will be glad to show you installations on properties of some of the largest Producing Companies who now consider SMITH SEPARATORS standard lease equipment.

Type 10—Capacity 25,000 bbls. oil, 100 million cu. ft. gas.
Type 1—Capacity 5,000 bbls. oil, 10 million cu. ft. gas.
Type 2—Capacity 2,000 bbls. oil, 5 million cu. ft. gas.
Type 3—Capacity 500 bbls. oil, 1 million cu. ft. gas.

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Cable Address: "Oilfield" N. Y.

Colorado Office:
434 U. S. Nat. Bank Bldg., Denver, Colo.
California Office:
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Texas Office:
5400 Columbia Ave., Dallas, Texas
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Perkins & MacIntosh
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er engineering investigation and design.

The patent covering the process is held by the engineering firm of Jones & McLaughlin, Wright & Callender Building, Los Angeles. Licenses to use the patent are issued to oil operators in conjunction with the engineering services rendered in investigating wells and designing efficient equipment. Payment of fees or royalties is made contingent upon successful operation of the process and the rates are established at a low figure for the purpose of encouraging the widest possible use of the process.

Oil Division A. I. M. E. Meets in Tulsa May 15

Tulsa, Okla.—On Friday, May 15, the Mid-Continent section of the American Institute of Mining and Metallurgical Engineers will hold a meeting in the municipal building in this city.

This is the first of a series of meetings which have been outlined by the association to be held at regular intervals. A. A. Beard, vice president and general manager of the Tidal Oil Company will be the principal speaker at the meeting Friday night, taking for his subject the "Cleaning Out of Wells with Compressed Air."

The Tidal Oil Company has used the Smith-Dunn process of well cleaning for the past several months and Mr. Beard will outline the results obtained. The Smith-Dunn process was thoroughly outlined in a previous issue of The OIL WEEKLY.

Another speaker for the occasion will be Chas. V. Milliken of the Amerada Petroleum Corporation on "The Use of Orifice Meters in Measuring Pay Sands, Based on Oil and Gas Ratios."

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Useful Aspects of Geology

For those people who have never acquired a systematic knowledge of geology, but who have an interest in the subject, a book called "Useful Aspects of Geology" has been published by S. J. Shand, professor of geology and mineralogy in the University of Stellenbosch, South Africa.

As the author says in his preface, he has written the book with the idea of giving in small bulk an account of the various ways in which a knowledge of geology can be turned to use, and also of pointing out where to go for fuller information on each particular matter.

The volume is small and can easily be carried in the pocket. It contains 13 chapters, beginning with first observations in the study of geology. The following topics are then discussed in order: Geological age, geological structure, the composition of eruptive rocks, the eruptive rocks, mineral deposits connected with eruptive rocks, weathering, soil and sediment, sedimentary rocks and their useful aspects, the metamorphic rocks, rocks as building materials, water finding, oil geology, and some engineering problems.

Adequte inllustrations are included to make explanations complete.

For one desiring to obtain accurate knowledge of geology without wading through much non-essential material, the volume is ideal.

Copies can be secured from the Gulf Publishing Company, P. O. Box 1307, Houston, Texas.

Reiter-Foster Officials See Producing Properties

Dallas, Texas.—Officials and a group of stockholders, representing a number of prominent Eastern capitalists, of the Reiter-Foster Oil Corporation made a tour of inspection of producing properties and wildcat operations of the company in Texas and Kansas last week. The party visited the Luling and Lockhart fields in Southwest Texas early last week, and then inspected wildcat drilling blocks held by the Reiter-Foster Oil Corporation on the East Central Texas fault line in Bastrop, Robertson and Falls counties. The party journeyed over to Breckenridge Thursday in a private car to view a wildcat oil producer brought in some weeks ago by the Reiter-Foster Oil Corporation in Southeastern Throckmorton County, and then departed for Kansas, where additional acreage is in process of development.

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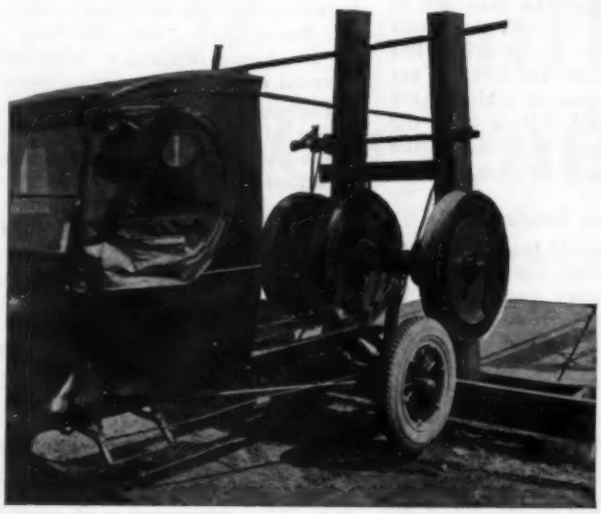

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The Formation of Oil Field Emulsions

(Continued from page 41.)

Texas and California, where bad conditions of emulsification exist, to decrease the agitation due to gas by holding back pressure on the wells.

By the use of separators it is possible to hold a back pressure on the well and effect a separation of oil, gas and water in traps above the ground before the pressure is released. This practice has generally proved very satisfactory, and has frequently resulted in reducing badly cut oil to pipe line oil with no further treating. Bell and Kerr[8] describe a typical separator in the El Dorado, Ark., field:

"The oil-gas-water separators in common use in El Dorado consist of about seven joints of 10-inch pipe with oil and gas risers at each end. The oil riser at the higher end of the separator consists usually of two 4-inch vertical nipples about 6 feet in height, each having at the top a four-way tee connected to chokes of sizes from 3/8 to 1-inch. The number and size of chokes used will depend on conditions. Another nipple extends from a central tee and connects with the flow line to storage. The chokes are required for high pressure wells, in order to lessen the flow and thus reduce water and sand trouble. The decrease in flow by the use of chokes tends to prevent the formation of cut oil. A more complete separation of gas and oil is accomplished in the last (high) risers. The separator is generally inclined, being about six feet higher at the end farther from the well in order that the water may separate readily at the lower end. For the purpose of bleeding off water and sand, three or four lateral 6-inch lines of three joints each are connected on the under side and near the lower end of the 10-inch pipe by means of tees or welded connections. The opposite ends are swedged down, so that 2-inch gate valves can be used for regulating the flow of water. The bleeders are regulated so that each will carry about an even distribution of water, in order to avoid excessive suction action on the oil in the separator at any particular point."

Another type of trap in use in the Ventura, Calif., field has reduced cut oil from 16 per cent to less than 2 per cent, and increased free water from 100 barrels daily to about 150 barrels. The difference represents the water emulsified when produced without using the separator. This trap consists of three joints of casing in parallel, one above the other. These joints of casing are cross-connected by several 2-inch lines. The middle joint is connected at one end to the well. Oil, water and gas flow through the middle point of casing under a suitable back pressure maintained on the system, water travels downward into the lower compartment by means of the 2-inch lines; gas rises in a similar manner to the upper compartment. Separation of the three constituents is thus effected during the travel through the system.

The air lift is made use of in some fields for producing oil. One method of air lift involves admitting compressed air, through an auxiliary string of pipe, at or near the bottom of the well. Before the air is introduced the fluid stands in the well at a height depending on the pressure in the producing sand. When air is admitted it rises as small bubbles through this column, thereby greatly increasing the volume of the fluid without increase in weight, consequently the height of the column rises until it balances the pressure in the sand. The air not only functions in reducing the specific gravity, but owing to their velocity the bubbles act as countless small pistons which carry the fluid upward and deliver it at the surface, the action being much the same as that of gas in flowing wells.

Emulsification Tendencies

The use of an air lift may be advantageous in some fields, but it has been found in almost every instance to be responsible for the formation of very stable emulsions, on account of the violent agitation of oil and water by the compressed air, as the mixture rises in the well. The permanency of emulsions formed in this way depends upon the character of the oil. In the Gulf Coast field, for example, where the air lift is used extensively, emulsions requiring treatment are frequently formed. However, in some places, on account of the character of the oil, the cut oil separates into water and oil upon standing. For example, in the "east pool" of the West Columbia field, cut oil produced in some of the wells breaks down quite rapidly, whereas in the north pool the emulsion is most permanent in character. The oil from the east pool is higher in gravity and is produced at a little higher temperature than the oil from the north pool. Undoubtedly, these factors have important bearing on the subject.

Swabbing

Frequently wells having a larger potential production than can be pumped, are put on the swab. In other wells the oil may be of such character that large deposits of paraffin or waxy materials form on the walls of the hole, thereby lowering the production. Pumping under these circumstances is often very expensive, due to the frequent cleaning required, and swabbing is sometimes desirable.

It is to be expected that with the swab traveling upward through a long length of casing, which naturally varies slightly in size, theer is a good deal of slippage past the rubber rings. Any such slippage forces the water and oil through the narrow annular space at such a great velocity that emulsification takes place. This coupled with the agitation and velocity of the fluid, as it passes through the check valves when the swab is being lowered, accounts for the production of cut oil so frequently met with when a well is being swabbed.

The pump used for pumping wells consists essentially of a steel cylinder, called the working barrel, which is made in various lengths and diameters. In the lower end of this barrel is the standing valve, which is a steel ball resting on a seat surrounded by a cage. The standing valve seats snugly in the bottom collar of the working barrel, and prevents fluid from passing down out of the tubing. The traveling valve is of similar construction and is used together with leather cups in the working barrel above the standing valve. As the name implies, it is raised and lowered in the barrel during operation.

The working barrel is screwed onto a string of tubing; at the lower end of the working barrel an anchor with perforations is attached. The traveling valve is attached to sucker rods inside of the tubing. At the tubing head the sucker rods pass through a stuffing box and are attached to the surface pumping equipment. In action the upstroke raises the traveling valve, and oil flows upward through the standing valve, thus filling the working barrel; on the downstroke the standing valve closes and the traveling valve opens and drops through the oil in the barrel. With the next upstroke this oil is lifted, due to the closing of the traveling valve. Many types of pumps built on this principle are in use, and may be designed to meet certain conditions where excess gas and loose sand cause trouble. In wells where the sand is loose, much trouble is caused by cutting of the cups, which are of leather, canvas or fiber; abrasion of the working barrel also takes place. In steel plunger pumps, both the plunger and working barrel may become scarred.

Emulsification in Pumping Wells

In pumping wells there are two separate underground sources where cut oil may be formed. The first is in the working barrel and the second in the tubing.

Emulsification in Working Barrel

There is always some agitation of fluid in the working barrel, especially if the well is being pumped rapidly. The rapid down stroke of the traveling valve or plunger forces the fluid through the port at a rather high velocity. This agitation is not serious in itself, but when conditions in a pumping well are such as to cause additional mixing, large quantities of cut oil are often produced.

If the cups, barrel, plunger or valve have been cut by sand, or if the cups have creased, leakage will take place. When the pump is working under the total head of fluid, oil and water are

(Continued on page 60.)

[8]Bell, H. W., and Kerr, J. B. The El Dorado Arkansas, oil and gas field; Cooperative Report, U. S. Bureau of Mines and State of Arkansas, 1922, pp. 58-59. Obtainable from Commissioner of Bureau of Mines; Mfg. and Agriculture, Little Rock, Arkansas.

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MOORE TUBULAR STEEL DERRICKS

Inglewood May Get 30,000 Barrels By June

New field near Los Angeles surprising many with big wells comparatively shallow depths

By W. E. Green
Staff Representative

Los Angeles, Calif.—Conditions in the new Inglewood at the edge of Los Angeles leads one to expect that the total production in the field will be around 30,000 barrels by June 1. This surprising turn has caused greatly increased activity in the field and there is a chance that the productive part of the field will be drilled very closely by those holding close in acreage.

The first wells drilled in this field were small, around 1200 to 1900 feet, but in the center of the area it has been found that by drilling to about 2500 to 2600 feet a second sand can be taken in, thus giving these wells more than 1200 feet of producing formation, with a small break between the first and second horizons, with no water in between.

Increased to 2100 Barrels

The Associated Oil Company's Vickers 2 proved up this condition. The well came in for about 1000 barrels at 2548 feet, taking in more than 1200 feet of pay. The flow has been gradually increasing, around 50 barrels increase per day, until late this week it was producing at a daily rate of about 2100 barrels of 20.6 gravity oil with 100 pounds pressure on the tubing and 375 pounds on the casing. The tubing pressure has shown a steady increase.

The Petroleum Midway's Moynier 2 came in at 2567 feet for slightly better than 1000 barrels and has increased to about 1900 barrels of 18.2 gravity oil with tubing pressure at 45 pounds.

The Associated is now drilling, or will be drilling in two or three days, 18 wells on the Vickers with indications that at least seven of these will produce around 1000 barrels each, and the production may be even better, if they act like Vickers 2 has been conducting itslf. The Standard Oil Company has ten wells nearing completion in the territory practically proven for big wells, while Petroleum Securities (Doheny) has seven drilling in this territory and the Petroleum Midway has two which should be big wells.

These wells alone, 26 of them, should average an initial production of at least 1000 barrels each, and they should be completed not later than June 1. Practically no trouble is found in drilling in this territory, since so far only one water shut-off cementing job has failed.

High Gasoline Content

The oil from these wells average from 18 to 20 gravity with a posted price of $1.25 and $1.27 per barrel. The Inglewood crude has a gasoline content of about 20 per cent, which compares with 22 per cent for Long Beach, although Long Beach crude carries a posted price of $1.40 for its average gravity of 24 degrees. For this reason it is expected that premiums will be offered for the Inglewood oil, although it's a little early for such action yet. But premiums are expected before June 1.

It is the custom to cement 15½-inch casing at about 435 feet in the Inglewood wells, followed with a string of 11-inch at 1200 to 1300 feet. A string of 8¼-inch is next, with some 1200 feet of slotted pipe at the bottom Three inch tubing is favord. It has been found that it is possible to drill wells to completion in about the same time that it takes to erect derrick and rig up. It is possible to spud and complete a well in three weeks.

Peak About August 1

Those making a close study of the activity at Inglewood are under the impression that the peak of production in the best part of the field will be reached around August 1, as it will take that long to make all possible locations and drill them to completion. A total of 40 wells were actively drilling late this week and probably 75 will be drilling inside of the next ten days. As there is no check on the life of the sand now being produced from, there is nothing to build an estimate on how high the peak of production will be.

The cream of the acreage proven for the deep pay is held by the Standard Oil Company, Associated Oil Company, Petroleum Securities and Petroleum Midway. The proven acreage to the west of these tracts, it has been indicated, is only good for very small wells at shallow depths, while the same can be said for land on east, north and south. It has been practically proven that the deeper pay does not extend very far to the west, although there is a possibility of extending some distance to the east of the present area.

High Production

The Associated Oil Company seems to have been lucky in selection of its lease, and more than successful in the handling of its wells. The Associated has two producers making almost one-third of total production of field. The field has 26 producers with a total of almost 9000 barrels daily.

Although there were increases in production the past week at Long Beach, Rosecrans and Inglewood, total daily average production of California fields was off and down to 599,750 barrels. Long Beach came back slightly to 113,500 barrels daily, while Torrance was off to 36,000 barrels due to several wells being off production. Santa Fe Springs also dropped 2000 barrels a day.

Show in Deep Test

The Marland Oil Company's deep test on the east edge of the Dominguez field has reached a total depth of 5000 feet, with only one little show of oil, which the drill passed by and out of the pay formation. There is still hope that the test will pick up the lower and deeper pay which many believe underlies a large part of the field.

The Union's wildcat at Ocean Park Heights has reached a total depth of slightly better than 4600 feet within finding anything of an encouraging nature.

Reports from Kern County are that drilling activity is on the increase and it is expected that many wells will be drilled in that area this summer, especially by the Standard and the Pacific Oil.

Torbron Now With McConnell

O. F. Torbron, Jr., formerly on the sales force of the Longhart Supply Company of Fort Worth, is now associated with the Joe McConnell Company, dealers in oil field specialties with headquarters at Houston. The Joe McConnell Company is the Texas distributor for Konset and Kleen-A-Well chemicals manufactured by The Sullivan Company of Memphis, Tenn., and Torbron will be stationed at Fort Worth to maintain closer connection with North and Central Texas fields.

Oklahoma Production Lowest for Months

Stored oil being drawn upon for current refinery needs following large movement of gasoline

By W. Lee Sloan
Staff Representative

Tulsa, Okla.—An additional loss of 10,000 barrels in the daily average production of Oklahoma fields is recorded for the week ending May 9. The present total is lower than it has been for many months. In the face of this steady decline, with but little hope of a revival of light oil production until the deep sand at Garber finds a peak, Oklahoma operators are optimistic and all are certain that the market will remain as strong as it is at present for some time. The influx of the enormous flush production of low gravity oil at Smackover is having little effect upon field activity and the number of new wells started remains about the same as previous weeks of the current year.

Tonkawa Again Loses

Tonkawa lost more than 5000 barrels in the daily average production for the past week however, the successful completion of extension wells during the past week will stimulate production to some extent. The 101 deep sand wells are now making 40,000 barrels per day. The April total for these wells has been announced as 19,709,346 barrels.

The Tonkawa deep sand area was given approximately a one-half mile extension by the Marland-Cosden No. 3-A School, in the northeast of the southeast of the northeast of section 33-25-1w, Kay County, an old well deepened to the Slick sand at 4277 feet. The well made 42 barrels during the first hour and 55 barrels per hour as the hole was being deepened to the 4290 foot level. Louie Friedman and others No. 1 Siler will further extend the deep sand producing area when it is completed for a producer. This well, located in the southeast of the southeast of the northeast of section 28-25-1w is standing with a hole full of oil at 4272 feet. The well made two good flows on Monday morning of this week but the exact probable production can not yet be determined.

As a result of these two new wells in the field, several locations have already been made and are now rigging up. The three direct offsets to the Marland-Cosden well are reported to be already drilling. Wentz Oil Corporation and the Comar Oil Company are preparing to drill wells in the extension territory.

Thomas Has New Deep Sand

A new deep sand discovery is the Marland Oil Company's completion of their No. 2 Thomas in the Thomas pool southeast of the town of Tonkawa. The Alcorn Oil Company, producing subsidiary of the Marland Company is the discoverer of the 2100 foot oil producing level in the Thomas pool but the parent company drilled in this deep sand producer. The well is located in the southeast corner of the southwest of the southwest of section 15-25-2w, Kay County, and its initial production was gauged at 4342 barrels for the first 24 hours. This new producing depth was found at 3962 feet. The gravity of the oil tested 39.5 degrees.

Garber Active

A total of 26 wells have now been started for the new deep sand in the Garber field which was found by the Sinclair Oil and Gas Company's No. 25 Belveal. The Sinclair Oil & Gas Company have 11 of these wells, the Cosden and Marland companies jointly have six, the Roxana Petroleum Company has three, the Healdton Oil & Gas Company has two, The Carter Oil Company and Southwestern Petroleum Companies have two and Crews Heirs Oil & Gas Company has one. This work brings the number of active locations to 65. With the Champlin Refining Company and the Boline Refining Company active bidders for this crude at a price of $2.70 per barrel and the Marland Oil Company making plans for a pipe line from Garber to Tonkawa, it now appears that there will be some competition for the new production. The Enid Pipe Line Company is also preparing to buy in the Garber field, paying the same price as Champlin and Boline. In the face of the flush production of deep sand, the price remains only 15 cents below the highest price of the year.

The Sinclair No. 25 Belveal, discovery well of the deep sand at Garber has again been deepened and now stands at a total depth of 4404 feet or 27 feet in the sand. The 24 hours previous to deepening it made 2450 barrels while the production after adding eight feet was 2580 barrels.

New Well for Holdenville Area

The Gypsy Oil Company's No. 1 Proctor, center of the southwest of the southwest of the northeast of section 35-8-8, Hughes County, Holdenville pool, which came in last week for 30 barrels per hour, has been drilled five feet deeper and it is now making 60 barrels per hour of 37 gravity oil from a total depth of 3285 feet. The Prairie Pipe Line Company is connected to this well. The Ramsey and Dempsey wildcat wells in section 23-9-9, Hughes County, is now settled to a daily production of 250 barrels.

Riverland Pool Adds Another

The second and best producer for the new Riverland pool of Tulsa County is the No. 1 Russell of Baker and Lynch, in the southwest corner of section 26-19-11. This well had the sand at from 2285 to 2287 feet and during its first hour it produced approximately 90 barrels. During the second hour and thereafter the well was making a steady flow of 50 barrels of 42 gravity oil per hour. This well is a northeast diagonal offset to the Riverland Oil Company's No. 1 Inschoe, discovery well of the new field which is now making 650 barrels per day.

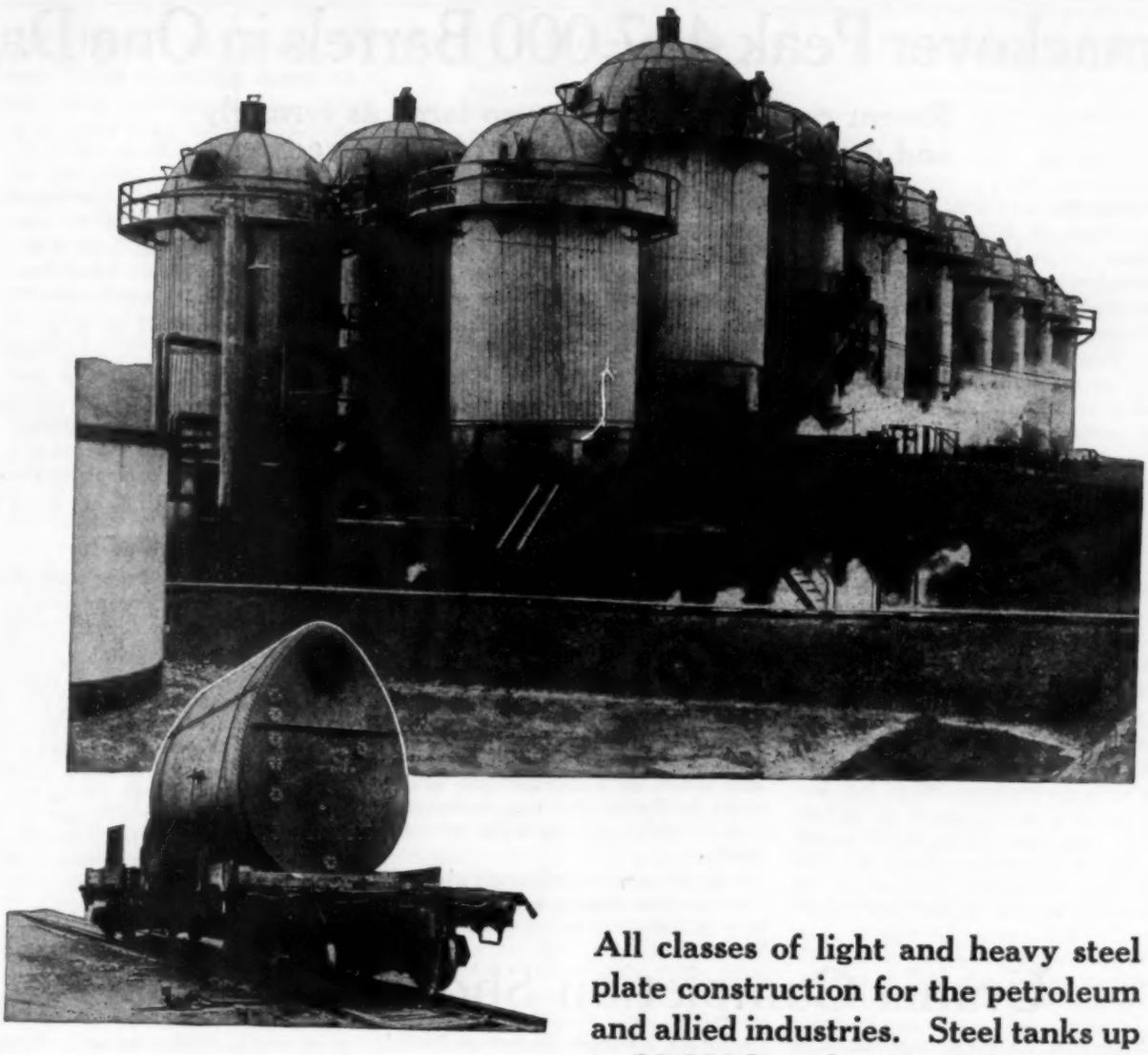
Another well in the shallow sand pool of Wagoner County was completed by the Lorraine Petroleum Company in their No. 8 Taylor, in the southwest of the northwest of the southwest of section 1-17-17 which made 15 barrels per day after a shot at 184 to 231 feet.

Storage Depleted

It is reported that 400,000 barrels of independent storage is being moved to refineries in the Mid-Continent area. The Burbank, Tonkawa and Cromwell-Papoose fields are being drawn on at the rate of 30,000 barrels per day while other fields are also getting their share of the storage depletion. A part of these runs can be attributed to the action of the Standard Oil Company of New Jersey in buying several hundred cars of gasoline in the Mid-Continent during the past week. As a great part of this order came from the smaller refiners, the storage capacity is again to be filled. The action of the Standard brought a material strengthening of the market when they were followed by many other buyers of gasoline. It is reported that the April gasoline market demand was the greatest in the history of the industry.

George N. Wise Dies

Pawhuska, Okla., May 11.—George N. Wise, 51 years old, paymaster for the last ten years at Osage Indian agency here, died suddenly at his home here May 10. Death was from a heart attack. He was well known throughout the Mid-Continent and Eastern fields.



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Smackover Peak 447,000 Barrels in One Day

Recent completions are not so large as formerly and decline is in evidence; 20-cent price advance

Shreveport, La.—Still another new high record of 447,000 barrels of oil produced in 24 hours was established at Smackover Saturday, May 9, when flush production from the Marlbrook sand mounted to 361,000 barrels per day. However, a second series of declines is reflected in the figures for Sunday and Monday. Monday deep sand production had fallen to 338,000 barrels per day, or an average of 2414 barrels per well per day from 140 producing wells.

With the notable exception of Dasko et al's Joyce gusher in section 34-15-15 of the northeast extension, which has increased its flow to 17,500 barrels of oil per day, the average initial flow from current completions shows a market decline from previous records. By reference to the list of completions, as published elsewhere in this issue, it will be noted that the flush flow from new wells ranges from 200 to 5000 barrels per day, as compared to gushers which made from 5000 to 20,000 barrels per day, as formerly. There are now only three wlls in the field making 10,000 barrels per day or better—the Dasko well above mentioned, the Roxana Petroleum Company's famous Murphy No. 2 and the Natural Gas & Petroleum Company's Bilyieu No. 1, both in section 9-16-15 of the heart of the field. Aside from these there are now only 11 wells yielding in excess of 5000 barrels of net oil per day.

There are still more than 250 drilling rigs in operation in the Norphlet area, and more than 40 deep wells are being drilled in, tested, or are waiting for cement to harden around the final string of casing.

The Dasko extension is located in virgin territory in the northwest quarter of section 34-15-15, a little more than a quarter of a mile north of west from the Standard Oil Company's No. 2 Powell in the same section, which first opened up that area. It was finished in ten feet of sand at a total depth of 2377 feet. It came in last Wednesday with an initial flow of 1500 barrels per day, which, as is characteristic of deep wells at Smackover, had increased to 17,500 barrels per day as of two days later.

The Shreveport-El Dorado Pipe Line Company is making a number of extensions to the heavy oil gathering line recently acquired from the Atlantic Oil Company. The Texas Pipe Line Company is laying an 8-inch line from section 25-16-15 to section 28-15-15.

An advance of 20 cents per barrel on Smackover heavy oil, which includes the flush production from the deep sand, was posted by the Standard Oil Company of Louisiana and promptly met by all other major purchasers, as of the opening of the market on May 8.

Louann

Preparations are being made to drill into and test the Louann sand in the well known Burton well, in section 30-15-17, Ouachita County, which was started by Jimmie Cox a year or so ago and abandoned before the Marlbrook horizon had been penetrated. The well has now been taken over by the Lion Oil and Refining Company, and a string of 6-inch casing has been cemented at around 2300 feet. It is locatd about two and three-quarter miles west of the western boundary of the Louann field, and about ten miles east of the Stephens field.

Urania Completion Shows Salt Water

Shreveport, La.—The enthusiasm of those who have had confidence in the prospects of the Urania district, in La Salle Parish, received another severe jolt last week, when the Rowe-Wallace Oil Company's Urania Lumber Company No. 1, in section 7-10-2e, was drilled into salt water. A "mystery well" was made of this test, although, as it developed, there was nothing to hide save failure. The well was quietly drilled into the sand after midnight, after the assembled scouts and other observers had sought much needed sleep.

The Rowe well, which is located about three-quarters of a mile northwest from the Urania and Zeigen wells, encountered the sand at a level about 25 or 30 feet lower. It showed only salt water, with practically no oil.

The Zeigen well is slopping over at the rate of 40 or 50 barrels of oil and salt water per day. It has been said that a standard rig will be built over this hole, and that an effort will be made to plug off the salt water.

The Gould & Monroe Drilling Company is nearing the final casing seat in its No. 1 Harper, in section 23-10-1e, about two and a half miles southwest from the discovery wells, in which the next test of the prospecting campaign probably will be made. The Gulf Refining Company is drilling below 2700 feet in its Urania A-1, a deep test located in section 22-10-2e, four miles southeast of the discovery wells. Despite the apparently unfavorable outlook, there are now a dozen drilling rigs in operation at Urania.

A test is to be made this week in the Triangle Drilling Company's Cox wildcat, in section 7-19-5, of the Sugar Creek community in Claiborne Parish. Eight-inch casing was cemented at 2404 feet. Because this well is sponsored by John Y. Snyder, discoverer of a number of the oil and gas fields of North Louisiana, it has attracted a great deal of attention, and has been called the most important wildcat test of the year.

The Fortuna Oil Company has cemented the last string of casing at 2595 feet in its Branton wildcat, in section 16-22-9, of the Shongaloo district, in Webster Parish, and it is likely that a test will be made this week. This well is located about two miles east of the famous Gleason No. 1, the first well drilled in Webster Parish to produce oil or gas in any quantity, and about six miles northeast of the Cotton Valley field, in township 21-10.

The Fortuna Company also has taken over the Bible well, in 8-20-9, about five miles southeast of the Cotton Valley field, which was abandoned several months ago by Stack & Egger, who started it, at a depth of 1938 feet. The Fortuna crew is drilling a water well, and it is said that operations in the wildcat test will be resumed as soon as a supply of water has been secured.

New Ohio Gas Company

Lima, Ohio.—Samuel Insull of Chicago is chairman of the board of the West Ohio Gas Company that is being formed to acquire the properties of companies that have been engaged in supplying natural and artificial gas to Lima and natural gas to Criderville, St. Marys, Celina and Wapakoneta in Ohio.

S. O. S. Takes Well Shooter From Tulsa to South America

Tulsa, Okla. — After unsuccessfully trying to extinguish a fire in the Comodora Rivadavia field in South America for ten days the Royal Dutch Shell Company appealed to the Standard Torpedo Company of this city for aid.

M. M. Kinley, an expert well shooter of the torpedo company here left for the Aregentine to make an effort to put the fire out on a well which is making upwards of a hundred million cubic feet of gas. Kinley will arive in Buenos Aires on May 21 and he is expecting to extinguish the flames the following day. He will use the gelatin torpedo which is set off by an electric switch.

Milan R. Bump, Cities Service Director, Dies

Denver, Colo.—Milam R. Bump, 44 years old, chief engineer for Henry L. Doherty and Company and an officer and director in more than 95 companies throughout the country owned or controlled by the Cities Service Company, died at his home here May 5. Death was from heart disease.

At the time of his death Mr. Bump was a member of the executive committee of Henry L. Doherty and Company, vice president of the Empire Gas & Fuel Company and since 1910 had been chief engineer of the Doherty interests with the exception of one year, 1915.

Offices throughout the country, of Henry L. Doherty & Company, Cities Service Company and subsidiaries remained closed for a time yesterday during the funeral services which were held from the residence here. Mr. Bump was extensively known throughout both the oil and public utility industries.

Smackover Passes Records Of Country's Big Fields

Tulsa, Okla.—The high production peak of the Smackover field has brought back the discussion of the high output of the larger fields of the United States and Oklahoma operators are comparing it with their own Cushing of 1916.

After surveying the records of the past, it is found that the Cushing high peak was 300,000 barrels while the Smackover field has surpassed this high peak mark by almost a hundred thousand barrels. The Powell field had a high peak of 354,893 barrels in November, 1923; Long Beach, California, made 256,000 barrels in October, 1923, for its high peak; Santa Fe Springs reached 342,000 barrels in September of 1923, and Huntington Beach did 115,000 barrels in August, 1923. The peak of the Tonkawa field was in May, 1923, when it was producing 112,232 barrels. One year and a half later the Tonkawa pool was producing 88,607 barrels from one sand found below the 4000-foot level, however, the output of the wells in the deep sand did not revive the field's daily output so as to establish a new high record.

The Smackover field on Saturday of last week was reported to be producing 395,850 barrels, making it the greatest of all producing fields up to the present time.

Expected Rainbow Bend Will Reach 25,000 Barrels Shortly

Wichita, Kansas. — Cowley County continues to hold the major part of Kansas oil interest while large wells are being completed in both the Rainbow Bend and Graham fields. It is now predicted that the daily average production of the Rainbow Bend field will reach 25,000 barrels within a short time.

The Beebe No. 2 and the J. Glasgow No. 6 were completed in the Rainbow Bend pool by the Waite Phillips-Independent-Marland group, for initial productions of approximately 2000 barrels. The Beebe No. 2, located in the northeast of the northeast of section 20-33-3 is the largest well to be completed in the field for some time. It made 160 barrels per hour just after completion. The Glasgow well is estimated to be good for 200 barrels per day.

In the Graham pool the Marland Oil Company's No. 4 Bower took on the appearance of a Rainbow Bend well when it came in for an initial flow of 125 barrels per hour from sand topped at 3484 feet and drilling to a total depth of 3492 feet.

The eighteen wells now drilling in the Rainbow Bend field will soon start to add their production to the present daily average total.

E. W. Sinclair in Tulsa

Tulsa, Okla.—Earl W. Sinclair, president of the Sinclair Consolidated Oil Corporation, arrived in this city Saturday for a short stay. Mr. Sinclair declined to make a prediction as to the future trend of crude oil prices and said that his trip was for the purpose of "getting genuine inside information on the present condition of the industry and to look after business affairs of his company." C. E. Crawley, vice president of the Sinclair company, accompanied Mr. Sinclair on the trip to Tulsa.

Standard Interested in Laratun

Wichita, Kan.—It has developed that the Standard Oil Company (Indiana) is interested in the Laratun Fuel Company of Wichita, a natural gas company recently organized to supply this and other Kansas cities with fuel from the Northern Oklahoma gas fields.

Construction work is under the supervision of the Hope Engineering and Supply Company.

First Aid and Rescue Contest

Springfield, Ill.—The petroleum industry has been invited to take part in the fourth international first aid and mine rescue contest which will be held in this city September 10, 11 and 12, 1925. This invitation is the result of the interest being manifested by the Bureau of Mines experimental stations located in the oil areas of the United States which have been sending out first aid cars for the past eight months in an effort to teach the oil field workers the importance of a knowledge of first aid work.

STOCKED BY LEADING SUPPLY HOUSES

French Gas-Tite Tubing Anchor

This photograph shows a French gas tight tubing anchor after the rig was destroyed by fire. After the rig was rebuilt the same anchor and tubing were replaced in the well, the first joint of tubing being the only portion necessary to replace.

Absolute protection against loss or damage of tubing by wind or fire.

Houston Pump & Supply Co.

HOUSTON, TEXAS

Fall in Light Oil Production Causes Increased Operations in West Texas

Breckenridge, Texas, May 12.—A heavy flow of wet gas has been developed from the wildcat test being drilled by H. H. Adams-Riley and associates on the McClelland farm in the northwest corner of Eastland County after going nine feet into the gray lime pay to a total depth of 3655 feet. The production is estimated at 10,000,000 cubic feet of gas daily, with some oil showing, and gives promise of becoming the forerunner of a new oil field for the county. The well is located in the northwest quarter of section 466, and passed up two other oil and gas horizons early this year at 3486-93 feet and 3620-24 feet. Considerable lease buying occurred when the wildcat showed for a small pumper in the top sand pay, and two nearby tests were started by Adams and associates on the Donovan and League farms. The League test is running casing at 3370 feet, while the Donovan No. 1 has reached a depth of 3530 feet, and should be at an interesting stage next week. The McClelland gasser is located about equal distance from the Leeray, Eastland and Ibex fields, but the deep pay appars to be related to the lime formation found in the Ibex field.

Both Eastland and Stephens Counties are registering a steady gain in drilling operations, since the danger of a crude price reduction on Mid-Continent oils has been removed by declining utput, and the recent completion of a big producer in the Barney Carter pool in the southeastern part of Stephens County has emphasized the fact that prolific areas are yet to be found in the two counties. Other than the Big Lake field, which is entirely controlled by two companies, Texas has no flush fields underway to hold the interest of oil companies and operators, and the new trend of play is taking its natural course in returning to Stephens and Eastland Counties, where undeveloped areas were forsaken several years ago for virgin territory then holding the spotlight of interest. The prevailing posted price of light oils is sufficient to encourage additional exploration work in the deep horizons in these two counties, and numerous operators are engaged in working over their old producers to stimulate production.

The Eliasville field in the upper part of Stephens County was extended one mile and across the Brazos river last week by the completion of Cox and others first test on the W. W. Cunningham 160-acre lease with an initial flow of 335 barrels natural at 3186-99 feet. This well is in section 1210, and on thte north bank of the river. The nearest production is the Hill leases owned by Mid-Kansas Oil and Gas Company.

Seven drilling operations are underway in the vicinity of the Barney Carter field in the southeastern part of Stephens County, with five others rigging up and sufficient locations made to assure a full score of tests in this district. The big producer brought in several weeks ago by George Barkley-Carter et al on the W. P. Pritchard land at 3534-44 feet is reported doing more than 2000 barrels daily. The next completion scheduled for the field is Barney Carter-Thompson et al's W. L. Langford 2, located between the discovery well and the above big producer, as it has reached a depth of 2720 feet.

Steady production gains maintained for several months by the numerous shallow pools in Callahan County were checked last week when the county averaged 4085 barrels daily, or about 195 barrels under the previous week's average. The output of this county has been more than doubled in three months solely from shallow wells, and production reached a peak of 4355 barrels daily for the week ending April 15. The flush has been taken off the pools uncovered some weeks ago, and new discoveries will be necessary to cause production to resume its upward trend. New interest in shallow possibilities of the north half of Shackelford County has been aroused lately, and major companies are joining in on the lease buying preceding the wildcat campaign.

No Decision by Osage Council

Tulsa, Okla.—No conclusion was reached by the Osage tribal council following the conference held in Pawhuska last week with representatives of the Osage Oil and Gas Lessees Association to partially abrogate the drilling suspension laws in Osage County. The entire proceedings of the conference have been forwarded to Charles H. Burke, commissioner of Indian affairs at Washington and to Hubert Work, secretary of the interior, without any recommendations from the council.

Tools Blown Out of Hole; Steel Derrick Uninjured

Tulsa, Okla.—A rather peculiar incident happened recently in the Okemah field in Oklahoma when the Independen Oil and Gas Company of Okmulgee drilled in its Alexander 2 well in section 2-9-9.

The well came in for 51,000,000 cubic feet of gas and spraying 115 barrels of oil per hour. The tools were blown out of the hole and clear of a Wertzberger derrick that was being used with no damage to the derrick.

Harbert Goes With Ratigan

Tulsa, Okla.—L. C. Harbert, who has been factory representative for the Axelson Machine Company in the Tulsa district, has been named manager of sales for J. P. Ratigan in the Mid-Continent and Rocky Mountain states.

He will make his headquarters in Tulsa and will cover the states of Kansas, Oklahoma, Texas, Louisiana, Arkansas and Colorado, New Mexico, Wyoming and Montana.

Oil Scouts Convention Changed to Fort Worth

Fort Worth, Texas.—The second annual convention of the National Oil Scouts Association of America has been transferred from Ardmore, Okla., to Fort Worth, according to announcement made by Ben M. Bell of Wichita Falls, president of the organization, and the meeting dates have been changed to June 15 and 16. The convention held last year at Mineral Wells attracted most of the scouts in Texas fields, as well as a number from Oklahoma and Louisiana, and the increased membership of the organization will result in a greater attendance at the Fort Worth meeting.

Old High-Gravity Producer At Luling to Be Reworked

Luling, Texas.—The old Walker well, which created so much excitement in the Luling field when it came in with high gravity oil, is to be given a thorough test to find out the real value of the well as a producer. L. B. Ivey is preparing to examine every foot of hole from the first oil formation, 680 feet to 2368 feet, the bottom of the well.

The well was drilled about two years ago by S. E. J. Cox Company, when the field was near its peak. Casing was set in about 40 feet of shale, leaving only about 20 feet to produce from. Some operators believe that casing being set so deep in the formation is one reason for small production. Others state that the crude is coming from a break in the casing at a shallower depth.

The well is located about half way between Luling and the producing area of the old Caldwell County field. It is on a direct line northeast and southwest from the Lockhart field. The oil being of 40 gravity has led some operators to believe that this well will prove the trend of the Lockhart field and many leases in the district between the well and the new field.

The Walker well is making about two barrels of oil, which is high in naphtha, gasoline and lubricating oil content. It is very similar to the oil in the Callahan well, eight or nine miles to the north of it.

Leaseholders in the vicinity of this well have pooled a large block to give to Mr. Ivey on the completion of this well.

When two experienced production men conceived the idea of Improved Pumping Equipment, they worked out these features:—

Designed for direct motor connection but also arranged for gas or oil engine, either directly connected or geared—

A unit of pump and hoist that replaces the standard rig—

Hoist with sprocket to run rotary to use in cleaning out wells. Hoist may be made into draw works to use for fishing jobs—

Efficient performance but low power cost. Rugged and simple in construction to require little attention.

Time required to pull rods and tubing reduced fifty per cent.

LONGER, MORE continuous SERVICE.

Fly wheel effect stabilizes motor and distributes strains on rods and equipment.

SAFETY—no belts, counter shafts or rods, reduced fire hazard. Higher salvage value when well plays out.

Patents Pending

Lufkin Pumping Unit and Hoist

is meeting with wonderful success
—it will reduce pumping costs and increase profits—

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TULSA
317 Roberts Bldg.

CRUDE OIL PRICE QUOTATIONS

Crude Price Changes

May 8.—Effective at the opening of the market this morning the Louisiana Oil Refining Corporation abolished the new gravity grade on Smackover, put into effect on May 5, and posted an increase of 20 cents on all crude below 24 gravity, making the price 60 cents per barrel. This revision was met by all purchasers of Smackover oil.

Current Postings

EASTERN STATES

	May 15 1925	May 15 1924
New York Transit	$3.40	$4.50
Bradford (Pa.)	3.40	4.50
Gains	3.15	...
Other Pa. Grades	3.55	4.00
Cabel	2.05	2.20
Ragland	1.30	1.10
Corning	2.10	2.15
Somerset, medium	2.15	2.50
Somerset, light	2.30	2.45

CENTRAL STATES

Illinois	$2.02	$2.07
Idniana	2.03	2.08
North Lima	2.23	2.28
South Lima	2.23	2.28
Plymouth	1.55	1.45
Princeton	2.02	2.07
Waterloo	1.10	1.55
Wooster	2.15	2.15

WESTERN KENTUCKY

Posted by Indian Refining Company for crude from Allen, Warren, Franklin, Davies, Barren, Cumberland and Monroe Counties

36 and above	2.05	...
33 to 35.9	1.95	...
32.9 and below	1.85	...

CALIFORNIA

(Crude oil prices at well)

Los Angeles and Orange Counties

14 to 19.9 gravity	$1.25	$1.00
20 to 20.9 gravity	1.27	1.01
21 to 21.9 gravity	1.30	1.02
22 to 22.9 gravity	1.33	1.03
23 to 23.9 gravity	1.36	1.05
24 to 24.9 gravity	1.40	1.07
25 to 25.9 gravity	1.44	1.10
26 to 26.9 gravity	1.48	1.13
27 to 27.9 gravity	1.52	1.16
28 to 28.9 gravity	1.56	1.19
29 to 29.9 gravity	1.60	1.22
30 to 30.9 gravity	1.64	1.25
31 to 31.9 gravity	1.68	1.28
32 to 32.9 gravity	1.72	1.31
33 to 33.9 gravity	1.76	1.34
34 to 34.9 gravity	1.80	1.37
35 gravity and above	1.85	1.40
Fuel Oil	1.65	1.40

Rosecrans Field

36 to 36.9 gravity	$1.92
37 to 37.9 gravity	2.00
38 to 38.9 gravity	2.08
39 to 39.9 gravity	2.16
40 to 40.9 gravity	2.24
41 to 41.9 gravity	2.32
42 and above	2.40

MID-CONTINENT

(Prairie Prices)

Below 30 gravity	1.35	$ ...
30 to 32.9 gravity	1.55	...
33 to 35.9 gravity	1.80	...
36 to 38.9 gravity	2.00	...
39 to 41.9 gravity	2.25	...
42 and above	2.35	...

	May 15 1925	May 15 1924
(Sinclair Prices)		
Below 30 gravity	1.35	...
30 to 32.9 gravity	1.55	...
33 to 35.9 gravity	1.80	...
36 to 38.9 gravity	1.95	...
39 to 41.5 gravity	2.25	...
41.6 and above	2.35	...
(Texas Company Prices)		
Below 30 gravity	1.35	...
30 to 32.9 gravity	1.55	...
33 to 35.9 gravity	1.80	...
36 to 38.9 gravity	2.00	...
39 to 41.5 gravity	2.25	...
42 and above	2.35	...
(Magnolia Petroleum Co.)		
Under 28 gravity	1.00	...
28 to 30.9 gravity	1.35	...
31 to 32.9 gravity	1.55	...
33 to 35.9 gravity	1.80	...
36 to 38.9 gravity	2.00	...
39 to 41.9 gravity	2.25	...
42 and above	2.35	...
Corsicana, light	2.00	...
Corsicana, heavy	1.00	...
Mexia	2.00	...
Thrall	1.00	...
Wortham	2.00	...

NORTH CENTRAL TEXAS

(Humble Oil & Refining Co.)

Corsicana, light (Powell)	2.00	2.00
Mexia	2.00	2.00
Currie	2.00	2.25
Richland	2.00	...
Wortham	2.00	...

RANGER

(Humble Oil & Ref. Co.)

30 and below	$1.35	...
30 to 32.9	1.55	...
33 to 35.9	1.80	...
36 to 38.9	2.00	...
39 to 41.9	2.25	...
42 and above	2.35	...

WICHITA AND ARCHER COUNTIES

(Texas)

(Humble Oil & Ref. Co.)

30 and below	1.35	...
30 to 32.9	1.55	...
33 to 35.9	1.80	...
36 to 38.9	2.00	...
39 to 41.9	2.25	...
42 and above	2.35	...
Moran Crude		
30 and below	1.35	...
30 to 32.9	1.55	...
33 to 35.9	1.80	...
36 and above	2.00	...

SOUTH TEXAS

Mirando (Texpata)	1.00	.80
Mirando (Magnolia)	1.00	...

SOMERSET

(Grayburg Pipe Line Company)

30 and below	1.35	...
30 to 32.9	1.55	...
33 to 35.9	1.80	...
36 to 38.9	2.00	...
39 to 41.9	2.25	...
42 and above	2.35	...

GULF COAST

Grade "A"	1.75	2.00
Grade "B" at Blue Ridge, Hull and Pierce Junction	1.50	1.70
Big Lake (Reagan County)		
36 to 38.9	$2.00	...
39 and above	2.25	...

LULING

Based on Contract	1.15	...
Lockhart	2.00	...

	May 15 1925	May 15 1924
LOUISIANA-ARKANSAS		
Caddo		
38 gravity and above	2.05	...
35 to 37.9 gravity	1.95	...
32 to 34.9 gravity	1.85	...
Below 32 gravity	1.70	...
Homer		
35 gravity and above	1.80	...
33 to 34.9 gravity	1.70	...
31 to 32.9 gravity	1.60	...
Below 31 gravity	1.45	...
COTTON VALLEY		
All grades	1.00	...
Haynesville		
33 gravity and above	1.70	...
Below 33 gravity	1.60	...
Bull Bayou		
38 gravity and above	1.85	1.80
35 gravity to 37.9	1.70	1.65
32 to 34.9 gravity	1.55	1.50
De Soto crude	1.90	1.85
Crichton	1.70	1.65
Bellevue	2.00	1.75
Jennings	2.00	2.00
Vinton	2.00	2.00
Edgerly crude	2.00	1.80
Smackover		
Louisiana, Atlantic, Shreveport-Eldorado		
28 and above	1.35	...
27 to 27.9	1.30	...
26 to 26.9	1.25	...
25 to 25.9	1.20	...
24 to 24.9	1.10	...
Below 24	.60	...
The Texas Company		
26 gravity and above	1.30	...
24 to 25.9	1.00	...
Below 24	.60	...
Standard Gulf		
27 and above	1.30	...
26 to 26.9	1.25	...
25 to 25.9	1.20	...
24 to 24.9	1.10	...
Below 24	.60	...
El Dorado		
33 gravity and above	1.70	...
Below 33 gravity	1.60	...
East Field (Calion)	.40	...
Stephens District		
26 gravity and above	1.60	...
Below 26 gravity	1.40	...
WYOMING-MONTANA		
Wyoming		
Byron	2.10	...
Ferris	1.30	...
Elk Basin	2.15	1.95
Grass Creek	2.15	1.95
Rock Creek	2.00	1.70
Lost Soldier	1.28	...
Lance Creek	2.15	1.90
Mule Creek	1.50	1.10
Notches	.65	...
Big Muddy	2.00	1.50
Salt Creek	2.00	1.60
Osage	2.15	1.90
Hamilton Dome	2.00	1.60
Pilot Butte	1.35	1.25
Torchlight-Greybull	2.00	1.95
Lander	.70	.70
Montana		
Sunburst	1.40	1.05
Cat Creek	2.15	1.95
NEW MEXICO		
Hogback	2.20	...
CANADIAN CRUDE		
Oil Springs	2.70	2.73
Petrolia	2.63	2.68

*Bounty on Canadian crude is ¾ cents per gallon, or 26¼ cents per barrel.

THE SINCLAIR trade-mark does more than identify oils of quality.

It symbolizes the ideals of our Company. It represents our ambition to co-operate with Sinclair dealers to attain mutual growth.

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CHICAGO
22nd and Rockwell Streets
Telephone: Crawford 2000

Cable Address: "Lucent"

SINCLAIR OILS

The Formation of Oil Field Emulsions

(Continued from page 48.)

forced through these small leaks at high velocity, and emulsification invariably takes place. Operators find that in many instances, the formation of emulsion can be eliminated by replacing cut or creased cups with new ones.

When nearly all of the oil has been pumped off, and there is not enough in the hole to fill the working barrel, continued pumping not only produces no oil, but tends to churn the oil and water continuously, thus forming an emulsion.

Emulsification in the tubing results from the "whipping" of sucker rods or from leaks in the tubing. In pumping, the rods "whip" back and forth to some extent inside the tubing, and this serves to agitate the fluid. This is especially true when there is no counterbalance on the equipment above ground. Counterbalancing by means of weights tends to overcome the weight of fluid and rods in the hole, and consequently permits a smoother motion and decreases the sudden strains on the rods which are responsible for much "whipping." If there are leaks in the tubing the head of fluid above them will force oil and water out through such openings into the casing, where it may drain back to the bottom of the well. As before stated, any considerable velocity of oil and water through small openings causes the formation of emulsions. Hence, any oil and water leaking through the tubing will eventually make its appearance as cut oil when it is repumped.

The formation of cut oil from pumping wells may take place above ground as well as underground. This is frequently evident when samples taken at the casinghead show only small percentages of emulsion, whereas the oil delivered at the tank is badly cut. Since agitation of oil and water is primarily responsible for the formation of emulsions, evidently elimination of agitation in the lines between the well and tank will eliminate the cutting of the oil. There are at least two factors responsible for this agitation, namely, condition of the line and entrained or dissolved gas. If a line is constructed with sharp turns, or has constrictions from accumulation of scale, half-closed stops, and other causes, a turbulent flow will result which tends toward emulsification. Any low spots in the line where water may accumulate will afford an opportunity for mixing. Gas produced with the oil, either as free gas or liberated from solution, will tend to agitate the fluid throughout the length of the line with the same results as described in connection with flowing wells.

Conclusion

It might be said generally of all producing methods, that the water should be separated from the oil at the earliest point possible, since any additional handling of the two fluids together involves not only extra expense, but increases the opportunity for the formation of emulsions. The formation of emulsions usually results in an additional expense for separating the cut oil into free oil and water. It is frequently possible to prevent the formation of cut oil. Obviously, this may often be cheaper than installation of dehydrating plants.—Reports of Investigations, Department of the Interior.

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NATIONAL
TURNBUCKLE DERRICKS

Fire Protection Association Considers Oil Field Problem

Chicago, Ill.—The National Fire Protection Association opened its convention in the Congress Hotel here Tuesday.

One of the subjects to be discussed by the association will be the prevention of oil field fires. Representatives of leading oil associations have registered as delegates to the meeting and have expressed their desire of coming to some conclusion as to a table of distances for oil storage tanks from adjoining property lines.

The American Petroleum Institute has taken the matter of fire protection up thoroughly during the past few months and are here represented by W. R. Boyd, Jr., assistant secretary and counsel for the institute. Representatives of Mid-Continent oil associations are: W. M. Welch of Tulsa, D. W. Moffitt of Tulsa, L. L. Marcell of Kansas City and Alf G. Heggem of Tulsa.

AVERAGE DAILY PRODUCTION FOR U.S.

Mountain States

Daily pipe line runs in the Rocky Mountain region during the past week recorded a sharp increase over runs for the previous week, due to the gradual increase in many of the smaller fields. Comparative runs for both weeks from all fields follow:

WYOMING

	Past Week	Prev. Week
Salt Creek	57,770	57,740
Lost Soldier	5,075	3 800
Grass Creek	4,775	4,460
Big Muddy	3,180	3 225
Rock River	3 000	3,225
Teapot	2,225	1,930
Mule Creek	1,225	1,370
Lance Creek	1,035	1,775
Elk Basin	1,060	920
Hamilton Dome	640	375
Osage	400	400
Lander	350	285
Greybull	140	150
Ferris	75	75
Poison Spider	50	80
Totals	81,000	79,810

COLORADO

Fort Collins	1,075	875
Craig	790	780
Florence	245	250
Tow Creek	140	150
Rangely*	100	110
Boulder	30	25
Totals	2,380	2,190

MONTANA

Kevin-Sunburst	3,650	3,500
Cat Creek	3,115	3,000
Totals	6,765	6,500

NEW MEXICO

Artesia	1,200	1,100
Hogback	535	520
Rattlesnake	450	275
Totals	2,185	1,895
Miscellaneous	200	200
Grand Totals	92,530	90,595

Kansas

Greenwood	25,945	25 720
Eldorado	13,985	13,995
Rainbow Bend	14,290	12,150
Augusta and Douglas	3,195	3,260
Elbing and Peabody	5 685	5,700
Fox-Bush	2,980	2,990
Blankenship	2,400	2,405
Florence and Covert	2,115	2,125
Other fields	18 965	19,000
Totals	89,560	87,345

California

Los Angeles, Calif., May 9.—The daily average production of the California fields the past week, compared with previous week, with number of producing wells in several fields was about as follows:

	Past Week	No. Prod. Wells.	Prev. Week
Long Beach	113,500	513	111,500
Huntington Beach	42,500	299	43,500
Santa Fe Springs	50 000	347	52 000
Dominguez	41 000	55	44 000
Torrance	36,000	535	39 000
Rosecrans	18,000	45	17,000
Inglewood	8 750	26	5,250
Others	290 000		290 000
Totals	599,750		602,250

Oklahoma

	Past Week	Prev. Week
Tonkawa	61,270	66 925
Burbank	55 870	58 095
Bristow	44,940	45,820
Cromwell	43.170	43 815
Osage (outside Burbank)	36.350	36,520
Gilcrease-Papoose	24,965	25 125
Okmulgee	23 920	24,000
Cushing	21,855	22 000
Hewitt	15 390	15,420
Wewoka	13 055	13,155
Otoe	6,760	5,610
Stroud	3,305	3,325
Braman	2 495	2,620
Other fields	90,100	90 320
Totals	443,445	452,750

Louisiana

Haynesville	13.775	13 030
Cotton Valley	10.850	9,950
Caddo Light	9.665	9 570
Homer	6,840	6,615
Vinton	5,975	5,720
Bull Bayou	4,545	4,550
Bellevue	3,700	3 705
Caddo Heavy	2,415	2,095
Evangeline	955	950
Edgerly	810	810
Elm Grove	635	620
Lockport (Lake Charles)	190	200
Anse La Butte	25	20
Totals	60,380	57,635

Arkansas

Smackover Heavy	357,000	324,335
Smackover Light	29,775	30.125
El Dorado	8,500	8,210
Stephens	1,965	1,850
Irma	1,400	1,250
Totals	398,640	365,770

Texas

NORTH-CENTRAL

	Past Week	Prev. Week
Wortham	52.000	52 500
Corsicana-Powell	51.585	50,995
Archer County	40 930	37,240
Big Lake-Reagan County	29 125	22,795
Mexia	20,250	20,000
Stephens County	17 925	17,355
Electra	17,010	17,315
Burkburnett	14,550	13 640
Young County	12,125	12 155
Eastland County	10,945	10,465
South Vernon-Wilbarger Co.	7,575	7 570
Richland	6,025	5,975
Callahan County	4,085	4 280
K-M-A and Iowa Park	4,475	4,020
Panhandle District	3 560	3,940
Moran-Shackelford County	3,255	2,740
Brown County	1,735	1,730
Mitchell County	1,775	1 695
Currie	1,500	1 520
Strawn-Palo Pinto County	605	600
Petrolia-Clay County	450	515
Montague County	125	145
Throckmorton County	80	85
Scurry County	55	60
Coleman County	75	65
Thrall-Williamson County	40	50
Jack County	25	30
Totals	301,885	289,460

GULF COAST

Hull	23.500	26 500
South Liberty	19,575	16,050
Orange	13,250	14.000
West Columbia	12,240	12,430
Goose Creek	9,975	9.900
Humble	4,625	4,650
Sour Lake	4 220	4,225
Big Creek	2,100	1,650
Saratoga	1,600	1.620
Batson	1,460	1 475
Spindle Top	1,300	1,350
Damon Mound	1,125	1,125
Blue Ridge	725	760
Pierce Junction	590	625
Barbers Hill	140	130
Markham	80	80
High Island	850	55
Nacogdoches	30	30
Totals	97,385	96,655
Luling	28,660	28,670
Mirando	11.800	11 :00
Lockhart (Lytton Springs)	5,580	5,320
Somerset	2,845	2,860
*Misc. South Texas	645	640
Totals	49,170	48,690
Totals Texas	448,440	434,805

Condensed U. S. Production for Twelve Months

(Stated in Barrels)

This table is compiled each week by The OIL WEEKLY, and shows daily production average for each state or section.

Daily average for month	*Mid-Continent	North Central Texas	Texas Coastal	Texas Total	Kansas	Okla.	Louisiana	Eastern States	Wyo. Mont. Colo. New Mexico	Calif.	Ark.	Texas
March	762,684	284,974	78,567	388,221	69,864	407,946	55,783	97,800	128,352	650,790	119,869	1,917,023
April	777,590	276,595	76,755	380,005	71,015	429,980	54,740	101,250	127,700	649,825	128,710	1,948,270
May	763,320	267,475	74,175	374,915	71,490	424,355	60,655	103,800	127,770	640,930	148,630	1,952,545
June	799,230	260,785	74,355	375,310	74,265	464,175	62 660	105,790	125,735	628 400	157,165	1,993,465
July	815,830	254,665	75,445	378,365	81,545	479,620	63,855	107,175	124,305	620,175	148,655	2,005,695
August	861,640	254,520	75,700	377,045	85,765	521,355	62,595	107,000	123,895	619,200	142,740	2,047,890
September	886,650	253,243	76,953	366,197	86,758	546 647	62,162	107,622	117 345	611,500	131,343	2,029,580
October	855,823	247,222	75,713	359,861	86 884	521,717	62.493	106,600	107,170	605,040	128,285	1,972,902
November	851,733	248,467	71,648	369.621	86,031	517,237	66,117	106,375	91,205	594,000	119,893	1,960,479
December	873 344	267,065	65,437	385,410	88,065	518,213	59 602	106,875	83,472	606,875	111,402	1,969,917
January	906,160	334 305	65,065	448,000	89,790	483,465	56 520	106,200	78,435	602,600	106,980	1,950,350
February	861 130	292,706	63 885	405,195	88,790	470 545	56,825	105,125	87,710	590,375	106,095	1,927,680
March	839,200	301 795	83,800	434.410	84,965	452,440	58 030	100,550	90 000	605,775	112,435	1,938 520
April	836.110	294,040	94,215	435,035	84,360	457,710	57 700	98,250	91,845	602 800	209,840	2 037,545
May 2	829,555	289,460	96,655	434,805	87 345	452,750	57,835	100,000	90 505	602,250	365,770	2 191,350
May 9	834,890	301,885	97,385	448,440	89,560	443,445	60,380	100,500	92,530	599,750	398,640	2,233,245

*Includes North Central Texas, Kansas, Oklahoma.
NOTE—Wortham, Corsicana-Powell and Mexia production included in North Central Texas.

The Formation of Oil Field Emulsions

(Continued from page 48.)

forced through these small leaks at high velocity, and emulsification invariably takes place. Operators find that in many instances, the formation of emulsion can be eliminated by replacing cut or creased cups with new ones.

When nearly all of the oil has been pumped off, and there is not enough in the hole to fill the working barrel, continued pumping not only produces no oil, but tends to churn the oil and water continuously, thus forming an emulsion.

Emulsification in the tubing results from the "whipping" of sucker rods or from leaks in the tubing. In pumping, the rods "whip" back and forth to some extent inside the tubing, and this serves to agitate the fluid. This is especially true when there is no counterbalance on the equipment above ground. Counterbalancing by means of weights tends to overcome the weight of fluid and rods in the hole, and consequently permits a smoother motion and decreases the sudden strains on the rods which are responsible for much "whipping." If there are leaks in the tubing the head of fluid above them will force oil and water out through such openings into the casing, where it may drain back to the bottom of the well. As before stated, any considerable velocity of oil and water through small openings causes the formation of emulsions. Hence, any oil and water leaking through the tubing will eventually make its appearance as cut oil when it is repumped.

The formation of cut oil from pumping wells may take place above ground as well as underground. This is frequently evident when samples taken at the casinghead show only small percentages of emulsion, whereas the oil delivered at the tank is badly cut. Since agitation of oil and water is primarily responsible for the formation of emulsions, evidently elimination of agitation in the lines between the well and tank will eliminate the cutting of the oil. There are at least two factors responsible for this agitation, namely, condition of the line and entrained or dissolved gas. If a line is constructed with sharp turns, or has constrictions from accumulation of scale, half-closed stops, and other causes, a turbulent flow will result which tends toward emulsification. Any low spots in the line where water may accumulate will afford an opportunity for mixing. Gas produced with the oil, either as free gas or liberated from solution, will tend to agitate the fluid throughout the length of the line with the same results as described in connection with flowing wells.

Conclusion

It might be said generally of all producing methods, that the water should be separated from the oil at the earliest point possible, since any additional handling of the two fluids together involves not only extra expense, but increases the opportunity for the formation of emulsions. The formation of emulsions usually results in an additional expense for separating the cut oil into free oil and water. It is frequently possible to prevent the formation of cut oil. Obviously, this may often be cheaper than installation of dehydrating plants.—Reports of Investigations, Department of the Interior.

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Mahan, McCarty and Besse, Contract Rig Builders

NATIONAL
TURNBUCKLE DERRICKS

Fire Protection Association Considers Oil Field Problem

Chicago, Ill.—The National Fire Protection Association opened its convention in the Congress Hotel here Tuesday.

One of the subjects to be discussed by the association will be the prevention of oil field fires. Representatives of leading oil associations have registered as delegates to the meeting and have expressed their desire of coming to some conclusion as to a table of distances for oil storage tanks from adjoining property lines.

The American Petroleum Institute has taken the matter of fire protection up thoroughly during the past few months and are here represented by W. R. Boyd, Jr., assistant secretary and counsel for the institute. Representatives of Mid-Continent oil associations are: W. M. Welch of Tulsa, D. W. Moffitt of Tulsa, L. L. Marcell of Kansas City and Alf G. Heggem of Tulsa.

AVERAGE DAILY PRODUCTION FOR U.S.

Mountain States

Daily pipe line runs in the Rocky Mountain region during the past week recorded a sharp increase over runs for the previous week, due to the gradual increase in many of the smaller fields. Comparative runs for both weeks from all fields follow:

WYOMING

	Past Week	Prev. Week
Salt Creek	57,770	57,740
Lost Soldier	5,075	3 800
Grass Creek	4,775	4,460
Big Muddy	3,180	3 225
Rock River	3 000	3,225
Teapot	2.225	1,930
Mule Creek	1.225	1,370
Lance Creek	1,035	1,775
Elk Basin	1,060	920
Hamilton Dome	640	375
Osage	400	400
Lander	350	285
Greybull	140	150
Ferris	75	75
Poison Spider	50	80
Totals	81,000	79,810

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Craig	790	780
Florence	245	250
Tow Creek	140	150
Rangely	100	110
Boulder	30	25
Totals	2,380	2,190

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Cat Creek	3,115	3,000
Totals	6,765	6,500

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Artesia	1,200	1,100
Hogback	535	520
Rattlesnake	450	275
Totals	2,185	1,895
Miscellaneous	200	200
Grand Totals	92,530	90,595

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Eldorado	13,985	13,995
Rainbow Bend	14,290	12,150
Augusta and Douglas	3,195	3,260
Elbing and Peabody	5 685	5,700
Fox-Bush	2.980	2.990
Blankenship	2.400	2.405
Florence and Covert	2,115	2,125
Other fields	18 965	19.000
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Torrance	36,000	535	39 000
Rosecrans	18,000	45	17,000
Inglewood	8 750	26	5.250
Others	290 000		290 000
Totals	599,750		602,250

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Burbank	55 870	58 095
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Okmulgee	23 920	24,000
Cushing	21,855	22.000
Hewitt	15 390	15,420
Wewoka	13 055	13.155
Otoe	6.760	5.610
Stroud	3,305	3.325
Braman	2 495	2,620
Other fields	90.100	90.320
Totals	443,445	452,750

Louisiana

Haynesville	13.775	13 030
Cotton Valley	10.850	9,950
Caddo Light	9.665	9 570
Homer	6.840	6.615
Vinton	5.975	5.720
Bull Bayou	4,545	4,550
Bellevue	3.700	3 705
Caddo Heavy	2,415	2,095
Evangeline	955	950
Edgerly	810	810
Elm Grove	635	620
Lockport (Lake Charles)	190	200
Anse La Butte	25	20
Totals	60,380	57,835

Arkansas

Smackover Heavy	357,000	324,335
Smackover Light	29.775	30.125
El Dorado	8,500	8,210
Stephens	1.965	1,850
Irma	1,400	1,250
Totals	398,640	365,770

Texas

NORTH-CENTRAL

	Past Week	Prev. Week
Wortham	52.000	52 500
Corsicana-Powell	51.585	50,995
Archer County	40 930	37,240
Big Lake-Reagan County	29 125	22,795
Mexia	20,250	20,000
Stephens County	17 925	17,355
Electra	17,010	17,315
Burkburnett	14,550	13 640
Young County	12,125	12 155
Eastland County	10,945	10,465
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Moran-Shackelford County	3,255	2,740
Brown County	1,735	1,730
Mitchell County	1,775	1 695
Currie	1,500	1 520
Strawn-Palo Pinto County	605	600
Petrolia-Clay County	450	515
Montague County	125	145
Throckmorton County	80	85
Scurry County	55	60
Coleman County	75	65
Thrall-Williamson County	40	50
Jack County	25	30
Totals	301,885	289,460

GULF COAST

Hull	23.500	26 500
South Liberty	19,575	16,050
Orange	13,250	14.000
West Columbia	12,240	12,430
Goose Creek	9,975	9.900
Humble	4.625	4,650
Sour Lake	4 220	4,225
Big Creek	2,100	1,650
Saratoga	1.600	1.620
Batson	1,460	1 475
Spindle Top	1,300	1,350
Damon Mound	1,125	1,125
Blue Ridge	725	760
Pierce Junction	590	625
Barbers Hill	140	130
Markham	80	80
High Island	850	55
Nacogdoches	30	30
Totals	97,385	96.655
Luling	28,660	28,670
Mirando	11 800	11 [illegible]00
Lockhart (Lytton Springs)	5.580	5,320
Somerset	2.845	2,860
*Misc. South Texas	645	640
Totals	49,170	48,690
Totals Texas	448,440	434,805

Condensed U. S. Production for Twelve Months

(Stated in Barrels)

This table is compiled each week by The OIL WEEKLY, and shows daily production average for each state or section.

Daily average for month	*Mid-Continent	North Central Texas	Texas Coastal	Texas Total	Kansas	Okla.	Louisiana	Eastern States	Wyo. Mont. Colo. New Mexico	Calif.	Ark.	Total
March	762,684	284,574	78,547	388,221	69,864	407,946	55,783	97,800	128,352	650,799	119,849	1,917,023
April	777,590	276,595	76,755	380,005	71,015	429,980	54,740	101,250	127,700	649,835	128,730	1,948,270
May	763,320	267,475	74,175	374,915	71,490	424,355	60,655	103,800	127,770	640,930	148,630	1,952,545
June	799,230	260,785	74,335	375,310	74,265	464,175	62,660	105,750	125,735	628,400	157,165	1,993,465
July	815,830	254,665	75,445	378,365	81,545	479,620	63,855	107,175	124,305	620,175	148,655	2,003,695
August	861,640	254,520	75,700	377,045	85,765	521,355	62,595	107,000	123,805	619,200	142,740	2,037,890
September	886,650	253,243	76,953	366,197	86,758	546,647	62,162	107,622	117,345	611,500	131,343	2,029,580
October	855,823	247,222	75,713	359,861	86,884	521,717	62,403	106,600	107,170	605,060	128,285	1,972,902
November	851,733	248,467	71,648	369,621	86,031	517,237	66,117	106,375	91,205	594,000	119,893	1,960,478
December	873,344	267,065	65,437	385,410	88,065	518,213	59,602	106,875	83,472	606,875	111,402	1,989,917
January	906,160	334,305	65,065	448,900	89,190	483,465	56,520	106,200	78,435	602,600	106,880	1,990,225
February	861,130	292,796	63,885	405,105	88,700	470,545	56,825	105,125	87,710	598,375	106,095	1,927,680
March	839,200	301,795	83,800	434,410	84,965	452,440	58,030	100,550	90,900	605,775	112,425	1,939,520
April	836,110	294,040	94,215	435,035	84,360	457,710	57,700	98,250	91,845	602,800	209,840	2,037,545
May 2	829,555	289,460	96,655	434,805	87,345	452,750	57,835	100,000	90,595	602,250	365,770	2,191,350
May 9	834,890	301,885	97,385	448,440	89,560	443,445	60,380	100,500	92,530	599,750	398,640	2,233,245

*Includes North Central Texas, Kansas, Oklahoma.
NOTE—Wortham, Corsicana-Powell and Mexia production included in North Central Texas.

COMPLETIONS FOR PAST WEEK IN U.S. FIELDS

Summarized Review of Field Results

State—	Completions This Week	Completions Last Week	Producers This Week	Producers Last Week	Gas Wells This Week	Gas Wells Last Week	Failures This Week	Failures Last Week	Initial Product'n This Week	Initial Product'n Last Week
Oklahoma	95	85	54	53	5	11	36	21	14,396	12,888
Kansas	23	23	16	19	..	..	7	4	1,941	2,240
Texas	160	116	95	81	5	1	60	34	32,557	26,472
Arkansas	41	57	35	48	..	2	6	7	50,070	88,280
Louisiana	9	9	5	6	1	1	3	2	278	875
Eastern States	176	164	127	76	25	43	24	45	1,560	1,578
Mountain States	17	14	15	13	1	..	1	1	1,420	4,835
California	19	20	16	18	..	..	3	2	500	10,865
Totals	540	488	363	314	37	58	140	116	102,722	148,033

NOTE—Following is the explanation of abbreviations, signs, etc., used in completion and wildcat reports: *—dry hole, abandoned well; ‡—salt water; †—junked and abandoned; ¶—million cubic feet of gas; abn—abandoned; bbls—barrels; b. s.—basic sediment; cas—casing; co—cleaning out; dk—derrick; dr—drilling; fsh—fishing; ft—feet, in—inches; lcn—location; m—milling; N. S. E. W.—North, South, East, West; r—reaming; sd—shut down; sdtr—sidetracking; sp—spudded; sr—straight reaming; std—standardizing; sw—salt water; td—total depth; ur—under reaming; wo—workover; wosr—waiting on standard rig.

Texas

GULF COAST

Company, Well and Location	Initial Production Bbls.	Depth
Big Creek—		
Gulf Prod. Co.'s T. W. Davis 20	850	3750
Hull—		
Humble Oil & Ref. Co.'s Guedry 7 (wo)	200	3200
Republic Prod. Co.'s Dolbear 114	2000	2420
Texas Co.'s Hannah 3	2000	3229
Texas-Vacuum's Hannah 4 (wo)	500	3220
Gulf Prod. Co.'s Phoenix Dev. Co. 50	300	3820
Phoenix Dev. Co. 49	200	3050
South Liberty—		
Humble Oil & Ref. Co.'s Pickett A No. 2	700	3500
No. 3 Pickett C	*	3750
No. 1 Hanszen "A"	*	3650
No. 2 Schade	1100	3600
No. 2 Pickett B	*	4025
Oxford Oil Co.'s Harrison 6	400	3500
Harrison 8	200	3640
J. S. Abercrombie's Harrison 1	400	3740
Harrison 3	1500	3550
Gulf Prod. Co.'s Schade Fee 5	300	3570
Schade Fee 3	650	3530
Williams et al 1	125	3550
Sun Oil Co.'s Schade 4	400	3675
Schade 7	*	3750
Vacuum Oil Co.'s Barrett 9	725	3450
Batson—		
Ada Belle Oil Co.'s Lovitt & Davis 94	25	1000
Goose Creek—		
Sun Oil Co.'s Wright 3	25	2540
Southern Exploration Co.'s Wright 11	15	1900
Sour Lake—		
Sun Oil Co.'s B. & E. 62	*	1225
Lake View Oil Co.'s Hardin 42	45	1550
Orange—		
Humble Oil & Ref. Co.'s Chesson "A" 15	400	3180
High Island—		
Gulf Prod. Co.'s Geo. E. Smith 2	1500	3250

NORTH TEXAS

Company, Well and Location	Initial Production Bbls.	Depth
Powell—		
Atlantic Oil Prod. Co.'s Irvine C. 20	35	1620
Humble Oil & Ref. Co.'s R. I. Kent 11	30	1650
Irvine C. 19	30	1650
W. Smith 2	30	1650
Irvine C. 17	30	1650
Pure Oil Co.'s Kent 15	20	1650
Roxana Pet. Co.'s W. Smith 4	30	1660
Skelly Oil Co.'s Bailey 1	10	1640
Strube & Strube's Hill "B" 1	275	2937
Tidal Oil Co.'s Bush 5	100	2997
Collins & Wheelock's Hill 6	300	2925
Garland Kent's Kent "A" 2	*	1680
Oxford Oil Co.'s Hill 1	500	2940
Roxana Pet. Co.'s Smith 3	40	1660
Wortham—		
Flynn et al's Evans 1	*	3175
Quaker Oil Co.'s Goodnight 1	*	3160

TEXAS MISCELLANEOUS

Company, Well and Location	Initial Production Bbls.	Depth
Lockhart—		
Brookins et al's Palmer 1	100	1390
Marland-Cranfill's Gomillion 5	800	1740
Mid-Kansas Oil & Gas Co.'s Brewer 3	*	1800
Gulf Prod. Co.'s Brewer et al 2	*	1820
Brewer 3, 56 acres	350	1260
Gomillion 5	200	1560
Gomillion 4	50	1715
Gomillion 3	40	1375
Brewer 2, 56 acres	*	1820
Witherspoon Oil Co.'s No. 3 Brewer	400	....
Brownlee et al's Beatty 1	200	....
Humble Oil & Ref. Co.'s Brewer 2	400	....
Randolph et al's Beatty 1	a	....
Mills Bennett's Brewer 2	500	....
Cranfield and Reynolds-Marland Oil Co.'s No. 2 and 5	1150b	....
Lucey Pet. Co.'s A. T. Palmer 1	600	....
Gulf Prod. Co.'s No. 4 and 5 Beatty	900b	....
Armstrong Bros. Riddle 1	a	....
Quaker Oil Co.'s Palmer 1	150	....
Mike annley's Beatty 1	600	....

a Not estimated.
b Combined.

ELECTRA

Company, Well and Location	Initial Production Bbls.	Depth
Allen Oil Co. Allen 49, dd	35	1832
Empire Gas & Fuel Co. Pierce 10	50	1560
Great Plains Prod. Co. Cunningham 3	6	309
Gulf Prod. Co. R. J. Miller 62	*	2026
Joe Howell et al Burnett 1-B	*	1655
Maer-Staniforth et al Waggoner 1	30	1706
Magnolia Pet. Co. Rio Bravo 44	6	958
Ryan Pet. Co. Henson 1	10	1347
Texhoma Oil & Ref. Co. & Cullum Burnett 3-E	100	1924

ARCHER COUNTY

Company, Well and Location	Initial Production Bbls.	Depth
Arco Oil Co. Arco Oil Co. Stehlik 1	*	1858
Camp Oil & Gas Co. L. F. Wilson 4-C	20	1607
Jack Clark et al Cowan-Turbeville 2	120	1094
Davis-Hart Oil Co. Roach-Junker 8	40	1238
Empire Gas & Fuel Co. L. F. Wilson 3-A	15	1625
Wirt Franklin et al W. F. Parrish 8-B	75	1569
Jeffers-Newby et al Andrews 3	*	1122
E. B. Lawson et al L. F. Wilson 4	30	1589
Lincoln et al May Rutty 1	*	1650
Magnolia Pet. Co. Kate Rogers 10	60	1333
Marland Oil Co. Ward 2	*	1269
Mitchem-Logan et al J. B. Wilson 1	*	1610
S. McGregor et al Llewellyn 6	300	1449
W. M. Moore et al Rogers 2	75	1277
Murchison-Fain & Marland Oil Co. Echols 7	100	1339
Muse et al Lowe 1	160	1262
Pace et al Watts 1	*	1406
F. Payne et al Parrish Bros. 1	*	1654
Phillips Pet. Co. J. H. White 61	25	1607
J. H. White 62	150	1614
J. H. White 63	*	1414
Prairie Oil & Gas Co. Richardson 16-B	100	1282
Richardson 18-B	25	1279
Richardson 11-C	75	1299
S. W. Richardson et al Ward 2	*	1200
A. T. Strong et al Wright 1	*	1450
Texhoma Oil & Ref. Co. Morrison 1	*	1825
Riner-Bailey et al L. F. Wilson 11-B	**	1000
L. F. Wilson 18-B	110	1617
Staley & Wynne et al L. F. Wilson 11-C	50	1611
The Texas Co. Hausler 1-B	*	1146
D. L. Wolf et al Teague 1	*	1335

YOUNG COUNTY

Company, Well and Location	Initial Production Bbls.	Depth
Burns-Maxson et al Wilborn 1	*	1380
Humble Oil & Ref. Co. Campbell 4	*	1084
Mahlstedt-Mook Oil Co. Logan 1-A	*	1401
Murchison-Fain et al Schlegel 15	*	1207
Multiple Oil Co. Hamilton 7	50	1219
Panhandle Ref. Co. Gambrell 6	40	1214
Van Hamert 1	*	1545
Simms Oil Co. J. D. Carpenter 1-A	300	1035
The Texas Co. W. E. Gambrell 15	175	1229
W. E. Gambrell 22	75	1212
W. E. Gambrell 25	135	1214
Graham 1	*	2113
Texhoma Oil & Ref. Co. Gambrell 9	60	1229
D. L. Wolf et al H. Haygood 1	*	991

K-M-A AND IOWA PARK

Company, Well and Location	Initial Production Bbls.	Depth
Brashear-Silkwood et al Fassett 1	*	1920
Hawkins-Hester et al Watkins 1-B	†	1815
Sam Kruger et al Allen & Kemp 13	*	1842
The Texas Co. Newt Maer 14	45	1768
Underwood Drilling Co. et al Pace 1	150	1786

SHACKELFORD COUNTY

Company, Well and Location	Initial Production Bbls.	Depth
Wilson & Gordon et al Elliott 1, dd	450	2092
Hope Pet. Co. Jeter 1	*	1225

STEPHENS COUNTY

Company, Well and Location	Initial Production Bbls.	Depth
Cox et al Cunningham 1	340	3199
Gholson-Thompson et al Young 1	*	2287
Magnolia Pet. Co. A. J. Jones 4	¶5-20	3272
Simms Oil Co. Jackson 6-A	25	3065

SOUTH LOUISIANA

Company, Well and Location	Initial Production Bbls.	Depth
Vinton—		
Edgerly Pet. Co.'s Vincent 3	*	3230

SOUTH VERNON

Company, Well and Location	Initial Production Bbls.	Depth
Atlantic Oil Prod. Co. Zipperle 1	*	2266
Zipperle 3	50	1328
Zipperle 4	200	1311
Humble Oil & Ref. Co. Castlebury 3	*	2690
Castlebury 13	85	1307
Castlebury 17	130	1308
McCamey-Lucey et al Stephens 7	70	2127

EASTLAND

Company, Well and Location	Initial Production Bbls.	Depth
Donley Drilling Co. Stubblefield 1	¶3	3340

Louisiana

Company, Well and Location	Initial Production Bbls.	Depth
Caddo Parish—		
Fortuna Oil Co.'s Doan-Thigpen 14, 5-20-15	3	2218
Gulf Ref. Co.'s Ferry Lake 222, 16-20-16	15	2286
The Texas Co.'s Russell 10, 3-20-16	10	2265
Total, 3 wells	28	
Cotton Valley Field—		
Ohio Oil Co.'s Bodcau 30, 27-21-10	100	2546
Cox 2, 15-21-10	150	2547
Total, 2 wells	250	
Monroe Gas Field—		
Thrift Oil & Gas Co.'s Smith-Russell 1, 17-20-4e	¶17	2175

EAST TEXAS COMPLETIONS

Waskom Gas Field, Harrison County—		
Cox et al's Abney 1, E. M. Jones Headright sur.	¶15	1960
Panola Oil & Gas Co.'s Mullins 1, T. D. Wilson Headright sur.	¶12	1905
Waterman Drilling & Dev. Co.'s Gaines 1, J. J. Blair Headright sur.	¶30	1913
Total, 3 wells	¶57	

Kansas

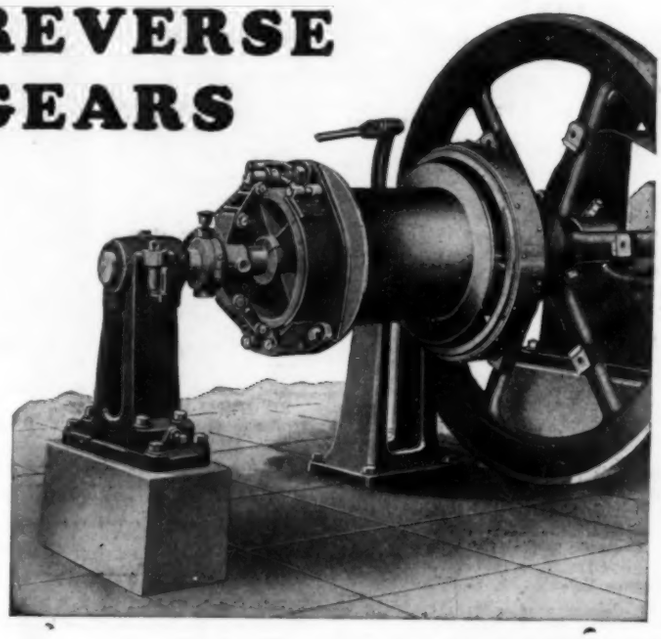
Butler County—		
Vickers et al's No. 1, NWc 2-25-3	75	2740
Vickers & Phillips Pet. Co.'s No. 1 King, C NW NW SW 17-24-4	330	2539
Cowley County—		
Marland & Neely's No. 3 Rockwell, NWc SW NE 13-32-4	125	2574
Trees Oil Co.'s No. 1 Estes, SEc SW NW 12-32-6	*	3415
Lewis Oil Co.'s No. 6 Elliott, C SW NW SE 31-30-6	*	2953
Roth et al's No. 2, NEc NE NW 4-30-8	50	2115
Waite Phillips et al's No. 1 Nelson, C NE NE SE 19-33-3	*	3633
No. 1-A, C NE NE NW 29-33-3	*	3273
Greenwood County—		
Skelly & Emerald's No. 3 Teeter, C SW SE SW 10-23-9	90	2387
Phillips Pet. Co.'s No. 2, C NE SW SW 15-23-9	175	2393
Greenland Oil Co.'s No. 3-A, C NE SW NE 2-23-9	100	2429
No. 1-C, C SE SW NE 2-23-9	125	2408
Skelly Oil Co.'s No. 1, C SE SE NW 2-23-9	250	2363
Phillips Pet. Co.'s No. 8 Edwards, C SE NW SE 13-23-0	30	2116
Empire G. & F. Co.'s No. 4 Hines, C SW SW 11-22-11	240	1895
No. 4, C NE NW NE 14-22-11	10	1669
York State Oil Co.'s No. 15, C NE SE SW 32-22-11	250	1968
Skelly Oil Co.'s No. 1, C SW SW NE 36-22-12	*	2177
Tidal Oil Co.'s No. 8, NEc NE SE 15-23-13	20	1827
Houston-Okla. Oil Co.'s No. 10, SEc NW SW 14-24-12	46	1767
Lyon County—		
Southwestern Pet. Co.'s No. 1, C SE SE SE 29-21-12	*	1990
Swartz et al's No. 2 Jones, C S L W½ SE 31-21-12	25	1916
Marion County—		
Garder & White Eagle's No. 1, SWc 9-21-4	*	2453

Oklahoma

Burbank Field—		
Lewis Oil Co.'s No. 3, C N L W½ NW NE 21-26-6	570	2991
Carter Oil Co.'s No. 11, C W L S½ NW NE 13-27-5	15	3026
No. 12, C N L E½ NW NE 13-27-5	500	3000
No. 13, C SE NW NE 13-27-5	300	3020
Carter County—		
Magnolia Pet. Co.'s No. 1, C SW SW SE 18-1s-3w	100	3185
Simpson-Fell's No. 1 Sahton, C SW SW NW 27-1s-3w	*	3465
Rockland Oil Co.'s No. 11, C NW NE SE 34-2s-3w	*	2503
Cotton Valley—		
Raymond Carter et al's No. 1, NEc NE SE 28-2s-13w	*	2512
Creek County—		
C. L. Sherman et al's No. 1-A, SEc NE SE 19-17-10	5	634
Whitton & Wilcox's No. 1, NEc SE NW 8-18-12	¶	2283
W. R. Cole's No. 1, NEc SW NE 4-18-11	*	2473
Wood & Farren's No. 3, C NE NW SE 21-17-9	15	2549
R. T. Wright's No. 1 Gunn, NWc NW SE 15-17-10	*	2980
O. P. Stover's No. 1 Dickson, NEc NE SW 19-17-10	*	3060
Riverland Oil Co.'s No. 9 Marshall, SEc NE SE 8-16-12	140	2020
Prairie O. & G. Co.'s No. 8 Rentie, SEc NE SW 2-14-8	30	2499
W. T. Harman's No. 4, C S L NW NE 33-15-10	*	3235
Tom Kelly's No. 1, NWc NE SE 4-14-10	*	3298
Burke-Greis' No. 4 Barnett, C SE NE 31-14-10	455	3490
Garvin County—		
Concord Oil Co.'s No. 9, C N L E½ SW SE 11-1n-3w	100	1580
Texas & Pacific C. & O. Co.'s No. 4, C S L E½ NW NW 17-1n-3w	40	1601
Hughes County—		
Tidal-Osage Oil Co.'s No. 7, C NE NW SE 4-9-11	140	2962
Mid-Kansas O. & G. Co.'s No. 3 Byrd, C NW NE SE 4-9-11	85	2939
No. 4 Byrd, C NE NE SE 4-9-11	75	2923

"Western"

REVERSE GEARS



Single Speed — and Two Speed

There are several important features of "Western" Reverse Gears that make them stand out among equipment of this type for oil country work.—The clutch and reverse mechanism can be adjusted while the engine is operating.—All end thrust on drum and reversing mechanism has been eliminated.—The clutch band is divided into two segments and it is taken-up evenly all around. When released, it clears the drum entirely.—Double motion on clutch band gives twice the travel for neutral position, resulting in much easier handling.—There are other features enumerated in Bulletin 301 which you should have. Write for it.

Western Machinery Co.

General Offices and Factory: 905 North Main St., Los Angeles, California.

720 So. Kenosha St., Tulsa, Okla. San Francisco, California 1106 19th St., Bakersfield, Calif.

Company, Well and Location	Initial Production Bbls.	Depth
Independent O. & G. Co.'s No. 6, C NE SW NE 2-9-9	480	3558
No. 7, C SW SE NE 2-9-9	1000	3345
T. B. Slick's No. 11, C SW SE NW 2-9-9	25	3347
Skelly Oil Co.'s No. 2, NE SW NW 4-9-9	*	3365
Jefferson County—		
Anderson Hapgood's No. 1, C SW SW NE 13-6s-5w	*	1645
Love County—		
Simms Pet. Co.'s No. 1-A, NEc SE NE 29-6s-3e	*	3447
Kay County—		
Comar Oil Co.'s No. 1-A Kincaid, SWc SW NE 21-29-1w	*	870
Lincoln County—		
Douglas Oil Co.'s No. 1, NWc 7-13-3	*	3000
Muskogee County—		
E. C. Lampton's No. 1, C E L NE NE 13-15-17	*	1251
Hutchinson et al's No. 2, NWc SE NW 35-15-16	*	1890
Pawnee County—		
Graham et al's No. 4, NWc SW SW 16-20-6	40	3080
Superior Oil Co.'s No. 1 Gillespie, SWc NW NE 9-20-7	¶	2600
Ed Reese & Sun Ray's No. 1-A, NEc 20-20-7	40	2656
Barnsdall Oil Co.'s No. 5, C S½ NW SE 24-21-8	10	2314
Payne County—		
Magnolia Pet. Co.'s No. 1 Payne, C NE NE 6-17-4	¶	2122
Hughes et al's No. 1-A, SWc SW NW 1-17-5	*	1760
Okfuskee County—		
Windsor Oil Co.'s No. 2, SEc NE SW 22-11-11	375	2503
No. 1, SEc SE NW 22-11-11	426	2635
Kingwood Oil Co.'s No. 4, C SW SE SW 35-10-9	*	4240
No. 5, C SE SW SW 35-10-9	*	3365
Okmulgee County—		
C. F. Noble O. & G. Co.'s No. 1, NEc SW NE 19-15-12	*	1699
Thompson & Black's No. 2 Vann, C NW NE 10-16-12	50	1435
Hope Pet. Co.'s No. 1, NWc SE SE 28-16-12	*	2324
E. O. Campbell's No. 4 Sampson, NWc SW NW 20-13-15	*	2025
Barbara & McMahan's No. 1, C NW SE NE 2-13-12	*	2836
Prairie O. & G. Co.'s No. 10, SEc SE NW 25-13-11	75	2451
Sheldon & Superior's No. 5, C NE NW 34-16-12	85	2187
Sheldon & Turner's No. 4, NEc NE NW 34-16-12	200	2200
W. B. Pine's No. 2 Hakwins, SWc 20-12-14	125	2862
T. A. Johnson's No. 1, C NE NE NW 3-15-12	*	2670
T. C. Muller et al's No. 1, C NW NW 4-15-12	*	2702
W. C. Newman's No. 1, C NW NW SE 27-14-12	*	2908
Valentine et al's No. 2, C SE NW NE 26-15-13	*	2000
Misener et al's No. 10, C S L NE SE 28-15-14	*	880
Smith et al's No. 5, C NW NE NE 23-14-14	¶	600
Mt. Fork & Clark's No. 2-A, SEc NW SW 28-13-11	*	3263
Osage County—		
Frank M. Breene et al's No. 3, C S L SE 31-22-11	40	2235
Titus-Morris-Bird et al's No. 5, C N L E½ NE 23-21-10	55	2553
Breene et al's No. 9, C E L N½ SW NW 5-21-11	585	2315
Sanders & Hancock Drlg. Co.'s No. 1, C SW NE 30-22-14	100	1291
No. 2, SEc SW NE 30-22-14	100	1288
Sanders O. & G. Co.'s No. 1, NEc NW SE 30-22-14	75	1397
Sanders & Hancock Drlg. Co.'s No. 2, C SE NW SE 30-22-14	*	1303
No. 3, C E L NW SE 30-22-14	25	1340
Skelly Oil & Ohio-Osage's No. 1, C S L SE 3-21-9	40	2313
Alcorn Oil Co.'s No. 3, C N L W½ SW 24-21-9	*	2672
Mid-Co. Pet. Co.'s No. 1, NEc NE SE 21-21-10	*	2110
D. F. Millgard's No. 1, NWc NW SW 12-22-11	*	2165
Sand Springs Home's No. 1, C W½ NE SW 30-20-11	*	1936
Seminole County—		
Mutual Oil Co.'s No. 4, C NW SW SE 33-11-8	1220	3402
Sinclair O. & G. Co.'s No. 4, C NE SE SE 33-11-8	240	3407
No. 7 C SW NE SE 33-11-8	600	3380
Gardner-Cinclair's No. 3 Hill, C NW SW SW 34-11-8	1560	3430
No. 6 Hill, C NE SW SW 34-11-8	1420	3416
Carter Oil Co.'s No. 11 Dunn, C SE NW NW 3-10-8	808	3399
Sinclair O. & G. Co.'s No. 1-A, C SE NE SE 5-10-8	300	3452
Sinclair-Gardner's No. 4 Hill, C NW NW SW 34-11-8	750	3414
Sinclair O. & G. Co's No. 1 Jackson, C SW SW NW 34-11-8	742	3431
No. 1 Manley, C SE SW NW 1-8-8	40	4103
Stephens County—		
Grimes & Russell's No. 1, C NE NE SE 23-1n-4w	*	3525
E. P. Kilgore's No. 1, NWc SW NE 2-1n-5w	10	1176
Magnolia Pet. Co.'s No. 3 Bond, NWc SE NW 19-1n-5w	*	2105
Tulsa County—		
E. B. Minchell's No. 1, SWc NW SE 9-18-13	30	1226
Laurel O. & G. Co.'s No. 1-A, SWc NE SW 4-18-13	5	980
Upp & Vick's No. 3, C W L SW SE 9-18-13	15	1235
Lillystrand et al's No. 4, C S L SW SE 34-18-14	¶	1385
Echo Oil Co.'s No. 1-A, NWc NW SE 5-19-12	15	1927
Sand Springs Home's No. 9, SWc SE NW 5-19-12	15	2207
Highway Oil Co.'s No. 12, C W L N½ SE SW 20-19-12	25	2156
Thornton et al's No. 2-A, SWc SE SW 20-19-12	80	2139
F. A. Gillespie's No. 3, C NW NE 31-19-12	*	2385

Wyoming

Company, Well and Location	Initial Production Bbls.	Depth
Salt Creek Field—		
Producers & Refiners Corp.'s No. 2-B 11-39-78	30	2108
Midwest Oil Co.'s No. 6-A, NE¼ 23-40-79	140	1610
No. 34-A NE¼ 22-40-79	50	1878
No. 6-A SW¼ 19-40-78	25	2057
Wyoming Associated Oil Co.'s No. 21-A, SW¼ 30-40-78	50	1990
No. 34-A, NE¼ 24-40-79	325	1883
No. 31-A, SE¼ 35-40-79	75	1651
No. 6 NE¼ 2-39-79	325	1290
No. 3-A, SW¼ 24-40-79	50	1603
Wyoming Oil Fields' No. 24-A, SE¼ 23-40-79	40	1460
No. 1-A, NW¼ 23-40-79	25	1645
Salt Creek Consolidated Oil Co.'s, No. 12-A S SW¼ 27-40-79	50	2470
No. 15-A, SW¼ 31-40-78	150	2005
Baxter Basin—		
Producers and Refiners Corp.'s No. 2, 13-17-104	¶	2285

Montana

Company, Well and Location	Initial Production Bbls.	Depth
Kevin-Sunburst Field—		
Ohio Oil Co.'s No. 2, 33-36-2	35	1580
Big West Oil Co.'s No. 7, SE¼ 31-35-1	50	1458
Springdale Structure—		
Springdale Drilling Co.'s No. 1	*	749

California

Company, Well and Location	Initial Production Bbls.	Depth
Inglewood—		
Petroleum Midway's Maynier 2	1900	2567
Standard's Vickers 2-3	75	2090
Dominguez—		
Union Oil Co.'s Callender 9	475	4210
Long Beach—		
Big Jumbo Oil Co.'s Taylor 1 (wo)	100	4417
Rosecrans—		
W. H. Fisher's No. 9	3000	4478
Julian's Athens Mom. 2	250	4372
Huntington Beach—		
Petroleum Midway's Thornton 1	100	3510
Torrance—		
C. C. M. Oil Co.'s Del Amo 16	125	3320
Petroleum Securities' Kleinmeyer B-10	20	3800
Standard's Marble Fee 2-3	100	3820
Superior's Torrance 60	125	3790
Midway Dist.—		
Balboa Oil Co.'s No. 46, Sec. 24-13-23	450	4180
North American's No. 18, Sec. 30-31-24	1500	3752
San Jose-Elk Hills' Lake 1, Sec. 26-31-24	*	5843
Sunset Dist.—		
Petroleum Midway's Dorothy 1, Sec. 34-32-24	450	3680
San Emidio Dist.—		
Standard's Kern 3-1	*	5660
Kern 4-1	*	2254
Comanche Point—		
Globe Petroleum's No. 1	*	2520
Ventura—		
Shell Co.'s Gosnell 7	500	4821

Arkansas

Company, Well and Location	Initial Production Bbls.	Depth
Stephens Field, Columbia County—		
Magnolia Petroleum Co.'s Hammond 7, 25-15-20	5	2153
Irma Field, Nevada County—		
Ames et al's Womack 4, 10-14-21	100	1188
Smackover Field Ouachita County—		
Arkansas Fuel Oil Co.'s Snyder 4, 34-15-15	25	1982
H. E. Clark's Shirey 2, 36-15-17	25	2317
Dashko et al's Joyce 2, 34-15-15	17,500	a2377
Forrest Oil Co.'s Arnold 1, 26-15-16	100	2075
Humble Oil & Ref. Co.'s Umstead 8, 5-16-15	1200	a2370
Home Refining Co.'s Berg 1, 27-15-17	25	2402
Invader Oil Co.'s Hardin 2, 22-15-16	75	2078
Louisiana Oil Ref. Corp.'s Bland 2, 27-15-17	50	2332
Miles et al's Neeley 2, 26-15-16	30	2060
Pure Oil Co.'s Cunningham 2, 30-15-15	100	2040
Shreveport Oil Corp.'s Umstead 3, 4-16-15	1500	a2374
Simms Oil Co.'s Berg E-4, 30-15-15	15	2015
Standard Oil Co.'s Umstead 7, 32-15-15	1500	a2400
Umstead 14, 32-15-15	5000	a2375
O. F. Whitaker et al's Berg 1, 27-15-17	50	2401
Whittiken et al's Anderson 6, 23-15-17	25	2382
Smackover Field, Union County—		
Arkansas Fuel Oil Co.'s Ferguson 5, 6-16-15	500	a2396
Murphy 3, 8-16-16	60	b2638
Eason et al's Palmer 3, 9-16-15	400	a2494
Gulf Ref. Co.'s J. Berry 7, 8-16-15	200	a2371
J. Berry 8, 8-16-15	*	577
Houston Oil Co.'s Parks 1, 9-16-16	*	b2656
Magnolia Pet. Co.'s Freeman 1, 7-16-16	35	b2648
O. G. Murphy's T. C. Murphy 4, 9-16-15	1000	a2464
Natural Gas & Pet. Corp.'s Bilyieu 4, 9-16-15	3000	a2413
Bilyieu 3, 9-16-15	2000	a2420
Roxana Petroleum Corp.'s H. Murphy 2, 9-16-15	4000	a2410
Rutledge Trust's Meek 5, 6-16-16	100	2226
Simms Oil Co.'s Cook 7, 16-16-15	700	a2468
Standard Oil Co.'s H. Murphy 5, 4-16-15	3000	a2360
Sun Co.'s Hatfield 5, 5-16-15	350	a2384
Sure Oil Corp.'s Flenniken 4, 5-16-15	100	a2392
The Texas Co.'s Calloway 4, 4-16-15	2500	a2351

Company, Well and Location	Initial Production Bbls.	Depth
Tidal Osage Oil Co.'s Vestal 5, 17-16-15	4000	a2513
Unity Pet. Co.'s Roper 8, 3-16-15	800	a2377
Total, 35 wells	49,965	

a"Deep Sand" (Marlbrook) wells.
bBlossom sand wells.

Eastern States

PENNSYLVANIA

Company, Well and Location	Initial Production Bbls.	Depth
Bradford Field—		
South Penn Oil Co. Weston Jr. 84	8	....
Weston Jr. 85	12	....
Bingham 439, tract 78	10	....
Bingham 439, tract 77	8	....
Bingham 439, tract 76	7	....
Bingham 582, tract 1	7	....
Bingham 533, tract 70	8	....
Bingham 88, tract 10	3	....
Bingham 554, tract 1	4	....
Riddle Estate 46	4	....
Hodge 1	3	....
Melvin 1	2	....
Associated Producers Co. Bingham 580, tract 339	12	....
Bingham 581, tract 343	12	....
Forest Oil Co. Porter 1	4	....
Porter 2	4	....
Pressure Oil Co. Howard 1	7	....
F. J. Burns, Burns 28	5	....
L. G. Dana, Dana 1	5	....
Gridiron Oil Co. Duke 1	4	....
A. E. Yahn Burns 1	4	....
Hennon Oil Co. Drake Heirs 1	7	....
Mitchell & Jeutter Duke 1	4	....
Lincoln & Co. Rew 1	3	....
J Roggenbaum Roggenbaum 2	3	....
Nesselson Bros. Nesselson 2	*	....
E. A. Potter, Potter 2	3	....
Evans & Wood, Evans & Co. 1	2	....
C. E. Potter Irvine 1	4	....
Blair & Duke, Duke 1	3	....
Petroleum Ref. Co. Pratt 1	2	....
Hope Oil Co. Sill 1	3	....
Venango County—		
Turner & Rossman Cox 1	15	....
Phipps Son Co. Phipps 5	4	....
C. Surrena Surrena 6	6	....
Titus, McKim & Co. James 5	*	....
C. W. Tracey Osborne 26	3	....
McCalmont Estate, McCalmont 45	3	....
E. Siederman, Hasson 49	4	....
Zimmerman & Son Zimmerman 6	2	....
Butler County—		
Keck, Baird & Co. Campbell 4	5	....
J. A. Elliott Goehring 3	4	....
American Nat. Gas Co. Norris 1	¶1	....
Lang & Co. McCarren 2	¶1	....
Delaney Bros. Delaney 1	¶1	....
E. C. Griffith, Griffith 2	3	....
Clarion County—		
Alum Rock Gas Co. O'Neill Bros. 1	7	....
J. W. Knappenberger, Knappenberger 1	3	....
W. W. Wilson & Co. Wilson 1	¶1	....
Wilson 2	*	....
Isherwood & Co. McCauley 3	¶1	....
B. F. Kribbs Brown & Co. 4	*	....
Allegheny County—		
Schuck & Co. A. Sickles 1	2	....
South Penn Oil Co. George Woodside 5	10	....
Robinson & Co. William Miller 2	2	....
S. Steele & Co. S. Steele 1	¶1¼	....
Greene County—		
Nat. Gas Co. of W. Va. M. C. Jones 1	¶1¼	....
Aarion & McCracken I. E. McCracken 1	¶2	....
Peoples Natural Gas Co. F. S. Sellers 1	2	....
Carnegie Nat. Gas Co. C. Stewart 1	5	....
Washington County—		
Conklin & Glass V. W. Conklin 1	20	2613
Manufacturers Light & Heat Co. Charles Hazlett 1	¶1½	....
Center-Middle Field—		
Rocky Grove Oil Co. Bingman 13	3	....
C. E. Carnahan Jennings 82	2	....
Mercer County—		
Gilson & Co. Drake 5	2	....

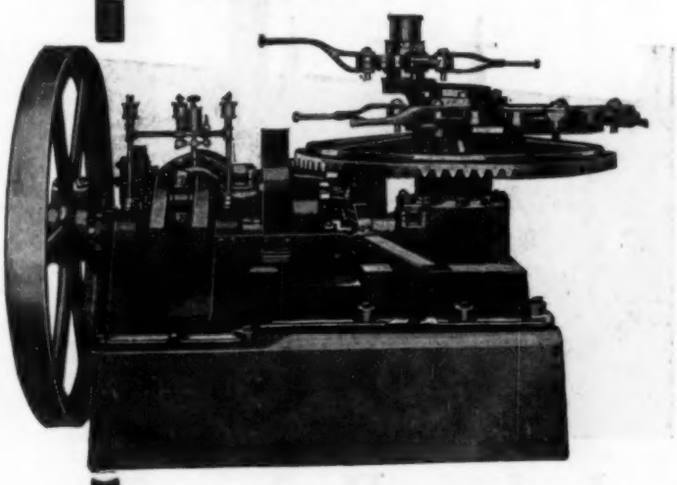
NEW YORK

Company, Well and Location	Initial Production Bbls.	Depth
Allegany County—		
Empire Gas & Fuel Co. Ltd. Empire 1	6	....
Empire 2	3	....
L. W. Shaner & Co. Shaner 1	7	....
T. J. Gilligan & Co. Gilligan 1	8	....
E. J. Phillips & Co. Phillips 1	4	....
Wilbart Oil Co. McDermitt 1	4	....
W. J. Miller & Co. Kimley 1	2	....
Kimley 2	2	....
Kimley 3	*	....
C. W. Mead, Mead 1	3	....
Bolivar Field—		
Sawnett Oil Co. Childs 1	5	....
Thomas, Miller & Hardman Hazard 1	10	....
Hughes, Hill & Kelley Waid 1	10	....
Victory Oil Co. Unknown 1	5	....
Fenner, Whitford & Co. Crandall 1	5	....

WEST VIRGINIA

Company, Well and Location	Initial Production Bbls.	Depth
Ritchie County—		
Hope Natural Gas Co. N. H. Kyser 1	*	....
Continental Oil & Gas Co. W. A. Ridgeway 2	*	....
Carnegie Natural Gas Co. Floyd Goff 2	*	....
Aetna Oil & Gas Co. Ross Estate 11	3	....
Marion County—		
Owens Bottle Machine Co. W. S. Clayton 1	¶2	....
Margaret Clayton 1	¶2	....
D. Cunningham 1	¶½	....
Dorca Cunningham 1	¶3	....
Doddridge County—		
Hope Const. & Ref. Co. H. B. Williams 6	8	....
Clifton Oil & Gas Co. Flora Freeman 4	20	....
May & Williams L. F. Williams 1	5	....
Kanawha County—		
United Fuel Gas Co. C. E. Halstead 1	¶3	....
Mary Jarrett 1	¶1	....
South Penn Oil Co. Virginia Dodd 1	¶1	....
Wetzel County—		
Hope Const. & Ref. Co. F. B.		

Patent applied for



Pattin 4-cycle Gas Engine geared direct to single eccentric and disc pumping power.

Equivalent to double eccentric. Makes possible perfect balancing of wells without swings. For wood or concrete foundation. Perfectly concentrated power, eliminating belts, and doing away with the large power house.

Made in 8 H. P., 12 H. P., 15 H. P., and 20 H. P. sizes.

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The Pattin Bros. Co.
Marietta, Ohio

Branch Offices and Warehouses at Tulsa, Okla., Wichita Falls, Texas.
Carried in stock by Frick & Lindsay Co. in Kentucky.

"PATTIN POWER"

Company, Well and Location	Initial Production Bbls.	Depth
Pylies 1	25	....
Silver Hill Oil Co. J. Steele 1	20	....
Roane County—		
Elkins Oil & Gas Co. Julia Bent 1	¶¼	....
Heck Oil Co. O. J. Brown 4	5	....
Calhoun County—		
W. H. Bickel Emily Smith 2	¶2	....
Martin Crowley D. & M. J. Kelvey 1	¶½	....
Harrison County—		
Salem Oil Co. J. H. Benedum 2	20	....
Wood County—		
Stout Bros. & Co. W. L. Munchmyer 4	5	....
Pleasants County—		
W. C. Patterson E. Hines 7	•	....
Monongalia County—		
Hope Const. & Ref. Co. Lewis Tennant 1	•	....

KENTUCKY

Company, Well and Location	Initial Production Bbls.	Depth
Barren County—		
Fred Moore, Moore 10	9	538
Wood Oil Co. Duff 2	9	....
Martin 1	¶1½	....
Gillespie & Wiggins Mansfield 3	8	536
Starr Oil Co. Ritchie 19	8	530
Houchins Leasehold Co. Ziegler 7	5	603
Henderson Oil Co. Burris 7	5	540
Allen County—		
Hice & Co. R. R. Smith 1	75	....
Work & Son, Lyle 7	30	....
Mrs. J. C. McAlpin McReynolds 10	5	400
Central Southern Oil Co. Walker 7	5	341
C. Foster R. O. Milligan 4	•	400
F. F. Blanchard Howell 1	•	222
Warren County—		
Rockfield Oil Co. R. C. Smith 14	50	464
George McGinley Wilson 6	35	1168
Henry & Cunningham Bryant 9	15	1140
Illinois-Kentucky Oil Synd. V. Andrews 1	•	....
Lucille Oil Co. Ellis 4	5	1136
Cumberland-Monroe Counties—		
Cumberland Oil Synd. C. V. Williams 1	•	....
Kanawha Oil Co. E. Coop 2	60	800
Vedder Oil Co. Thompkins 2	200	420

Byron Jackson Pumps
for Oil Line Pumping

Wherever dependable, simple, smooth flowing pumps are appreciated Byron Jackson equipment will be found on the job. In fact Byron Jackson centrifugals are acknowledged to have revolutionized pipe line pumping, since they overcome pulsation in the line, do not lose the residual pressure at succeeding stations, and handle the oil direct into the suction of the next pump, eliminating tankage at each station and resultant evaporation. Volatile oils are not reduced in gravity.

BYRON JACKSON Service PUMP MFG. CO.

BYRON JACKSON PUMP MFG. CO., INC.

Factory and Main Office
Berkeley, California

Branche : San Francisco, Los Angeles, Visalia, Salt Lake City, Portland, Ore.

Company, Well and Location	Initial Production Bbls.	Depth
Lee-Owsley Counties—		
Hupp, Duff & Co. Widow Porter 4	50	....
Black Gum Oil Co. Gourley-Redman & McGuire 13	50	....
H. B. Sipple Gourley-Parish 1	10	....
Wayne County—		
Superior Oil Corp. Dabney 7	20	....
Beaver Pet. Co. T. C. Morrow 10	5	....
E. G. Hogue & Co. J. H. Duncan 12	•	....
Floyd County—		
American Roller Mills Co. Summitt Area 4	¶5	....
Summitt Area 5	¶5	....
New Domain Oil & Gas Co. John Martin 4	¶5	....
Johnson-Magoffin Counties—		
R. G. Gillespie Sam Blanton 5	20	....
Oliver & Jenkins W. P. Adams 6	8	....
Lawrence-Johnson Counties—		
Townsend & Garrison J. N. Sparks 3	10	....
Lizzie Collins 2	12	950
Simpson County—		
Sully & Smally Hogan 9	8	600
Greenup County—		
Thompson & Co. Floyd Hall 1	5	....
Estill County—		
Adams & Brenner James Arthur 16	1	....
Morgan County—		
Frank Conley George Helton 1	•	....

SOUTHEASTERN OHIO

Company, Well and Location	Initial Production Bbls.	Depth
Noble County—		
Worrel Bros. J. B. Hutchins 1	4	....
J. F. Haines & Co. E. O. Davis 2	2	700
C. D. Harper & Co. Forest Moore 1	¶½	....
A. P. Sheets & Co. Thomas Hupp 5	•	....
J. H. Yearing & Co. Thomas Johnson 1	•	....

CENTRAL OHIO

Company, Well and Location	Initial Production Bbls.	Depth
Hocking County—		
Carter Oil Co. W. H. Mowery 1	20	....
Fairfield County—		
The Pure Oil Co. Owen Smith 3	15	....
Licking County—		
Wehrle Interests E. Ewers 2	2	....
Holmes County—		
Stephens, Morgan & Bortner A. R. Mackey 4	•	....

NORTHWESTERN OHIO

Company, Well and Location	Initial Production Bbls.	Depth
Wood County—		
Donald Oil & Gas Co. J. W. Sterling 21	35	1334
J. E. Welton & Co. Lindmeier 7	20	1289
W. G. Grolle, H. Grolle 2	15	1250
O. G. Rouse & Co. Frank Stratton 36	15	1541
Morrison & Ladd Joseph Lane 4	8	1372
Kundtz & Hulse, D. Levers 4	2	1390
Mercer County—		
Gerwin Oil Co. & Wolfe Bros. J. Beerman 2	15	1229
Celina Pet. Co. Brehm Bros. 4	10	1298
S. C. Tate Jr. Rose Fecher 1	10	1195
Kuhns & Co. Ricketts 5	10	1217
Recovery Oil & Gas Co. G. McAfee 3	2	1166
Young & Co. G. H. Dues 2	¶2	1171
Auglaize County—		
Iron Mountain Oil & Gas Co. James Rapp 3	15	1340
Geselchen & Young W. E. Cook 5	30	1334
Rock Oil Co. R. Steinerman 1	•	1330
Shelby County—		
L. A. Watson H. Sherman 1	21	1265
Eilerman Oil Co. A. Eilerman 5	•	1300
Hardin County—		
Cockley Oil Co. Greentree 3	5	1501
Ulrich, Whipple & Co. C. Nichols 1	2	1442
Hancock County—		
Janeri Oil & Gas Co. E. Bontwell 1	•	1410
Darke County—		
H. A. Marlin J. Schoen 6	•	1250

ILLINOIS

Company, Well and Location	Initial Production Bbls.	Depth
Wabash County—		
Ballard & Wirebaugh H. A. Price 2	70	1470
William Shaffer 1	10	1476
Gray & Co. R. & E. Higgins 1	•	1525
Clark County—		
Trenton Rock Oil Co. E. R. Ault 8	40	1431

PERMITS GRANTED FOR NEW WELLS

CALIFORNIA

Brea Olinda Field—Union Oil Co.'s Olinda 9, 10-3-9.

Coalinga Field—Penn Coalinga Pet. Co.'s No. 15, 1-20-14.

Elk Hills Field—Pan American Pet. Co.'s Crampton 5-1, 1-31-24.

Inglewood Field — Petroleum Midway Co. Ltd.'s Smith 4, 7-2-14; Moynier 5, 8-2-14. Pet. Securities Co.'s Cone 7, 8-2-14. Standard Oil Co.'s Vickers 7, 8-2-14; Vickers 8, 8-2-14; L. A. Investment 9, 8-2-14; L. A. Investment 10, 8-2-14. Brownmoor Oil Co.'s No. 1, 7-2-14; No. 2, 8-2-14; No. 6, 8-2-14.

Midway Field—E. & M. Oil Co.'s No. 13, 10-31-22. Valley Oil Co.'s No. 2, 14-31-22. North American Oil Cons.' No. 21, 30-31-24; No. 22, 30-31-24. Formax Oil Co.'s No. 19, 36-22-23. General Pet. Co.'s Buena Vista 11, 32-31-24.

Montebello Field—McGinley Oil Co.'s No. 17, 6-2-11.

Rosecrans Field—De Lendreceie Oil Well's Athens 2, 7-3-13.

Torrance Field—Superior Oil Co.'s Torrance 62, 30-4-13. C. C. M. O .Oil Co.'s el Amo 27, 9-4-14. Standard Oil Co.'s Dominguez 13, 13-4-14.

Ventura Field—General Pet. Corp.'s Notten 9, 28-3-23; No. 8, 28-3-23.

LOUISIANA

Ascension Parish—Empire Gas & Fuel Co.'s McElroy 2, 22-10s-4e, 684 ft W of Center of East line of Sec.

Bossier Parish—R. L. Autrey's Elston B-13, 10-19n-11w, 860 ft N and 150 ft W of SE Cor. of Sec.

Caddo Parish—W. D. & Carrie Cole Chew's State of La. No. 2, 34-21n-16w, 300 ft S and 300 ft E of NW Cor. NW¼ of SW¼.

Cameron Parish—Yount-Lee Oil Co.'s School Land 4, 16-12s-10w, 2500 ft N and 200 ft W of SE Cor. of Sec.

Jefferson Davis Parish—Yount-Lee Oil Co.'s Ervine-Bishop 5, 28-9s-5w, 228 ft W and 50 ft S of NE Cor. of Sec.

La Salle Parish—Imperial Oil & Gas Co.'s Urania 1, 10-10n-2e, 1520 ft N and 1520 ft E of SW Cor. of Sec. Ford and Banner's Tullos 1, 23-10n-1e, 200 ft S and 200 ft W of NE Cor. of Sec. D. C. Davis, Tr.'s Russell 1, 24-10n-1e, 1520 ft E and 460 ft N of SW Cor. of Sec.

Webster Parish—Fortuna Oil Co.'s R. R. Cox 1, 15-21n-10w, 330 ft N and 330 ft W of SE Cor. NW¼ of SW¼. Humble Oil & Ref. Co.'s Bodcaw Lbr. Co. C-1, 13-21n-10w, 530 ft N and 330 ft W of Center of Sec.

ARKANSAS

Columbia County—Arkansas Fuel Oil Co.'s Longino & Goode 1, 14-18-20, NEc NE¼ SE¼.

Drew County—McClintock et al's Ogle 1, 35-13-5, NEc SE¼.

Miller County—Adams et al's Bale 1, 15-16-22, center of north line of SW¼.

Nevada County—Falcon Drilling Co.'s Weaver 1, 6-13-21, NW¼ NW¼.

Ouachita County—Arkansas Fuel Oil Co.'s Snyder 6, 34-15-15, 325 ft S and W of NEc SE¼ SW¼. Gulf Ref. Co.'s Bennett 4, 33-15-15, 200 ft N and W of SEc SW¼; J. Goodwin 5, 32-15-15, 200 ft S and W of Center. Humble O. & R. Co.'s Flenniken 7, 6-16-15, 425 ft S and 942 ft W of NEc; Flenniken 8, 6-16-15, 275 ft S and 1609 ft W of NEc. Louisiana Oil Ref. Corp.'s Tyson 1, 27-15-17, 200 ft N and W of SEc NE¼ NW¼. Marine Oil Co.'s Hayes 6, 4-16-15, NEc Lot 3 in NE¼ J. D. Reynolds et al's Berg 3, 27-15-17, 200 ft N and W of SEc NE¼ NE¼. Standard Oil Co.'s Goodwin B-5, 5-16-15, 275 ft S and W of NEc Lot 3 NW¼; Umstead 18, 32-15-15, 200 ft N and E of SWc SE¼. C. W. White et al's Martin 1, 26-15-15, SWc of Section.

Union County—Barnesdale & Foster's Murphy 2, 17-16-15, 200 ft S and E of NWc NW¼ NE¼, old well to be deepened; Murphy 3, 17-16-15, 150 ft N and W of SEc W½ NE¼ NE¼, old well to be deepened. Clark & Melat's Wells B-3, 15-16-15, 225 ft S and 150 ft E of NWc NE¼ NW¼. Crawford & Sebastian's James 7, 6-16-15, NWc Lot 4 in NW¼. J. E. Crosby's Lawton A-4, 10-16-15, 150 ft S and W of NEc S½ SE¼ SW¼. Eason et al's Murphy 4, 15-16-15, center of north line SW¼ NW¼ NW¼; Palmer 1, 9-16-15, NEc W½ SE¼ SW¼. Federal Pet. Co.'s Flenniken 6, 6-16-15, center of west line of NE¼ SE¼; Flenniken 7, center of north line NE¼ SE¼; Lawton B-4, 10-16-15, 150 ft N and W of SEc N½ SE¼ SW¼, old well to be deepened. Gulf Ref. Co.'s Alphin 11, 10-16-15, 1980 ft S and 1100 ft W of NEc; M. L. Cook 5, 16-16-15, 1120 ft N and 200 ft E of Center; Flenniken 10, 5-16-15, 1980 ft N and 1120 ft E of SWc; G. E. Murphy 5, 8-16-15, 330 ft N and 990 ft E of SWc NW¼; H. Murphy 24, 4-16-15, 200 ft N and 2310 ft E of SWc; H. Murphy 25, 3-16-15, 200 ft N and 1120 ft E of SWc; T. C. Murphy 7, 9-16-15, 200 ft N and W of SEc, old well to be deepened; T. C. Murphy 10, 9-16-15, 200 ft N and E of SWc SE¼ SE¼. Henderson et al's Smith 2, 18-16-15, 1120 ft E and 200 ft S of NWc SW¼, old well to be deepened. Hickman et al's Graves 11, 3-16-15, NW¼ SE¼. Imperial O. & G. Co.'s Murphy 7, 9-16-15, center of north line W½ SW¼ NE¼. Kinnebrew et al's Williams 6, 3-16-15, center of west line of Lot 3 in NE¼. Magnolia Pet. Co.'s Scott 1, 12-16-17, 200 ft N and E of SWc SE¼ SE¼. Moco Oil Co.'s Flenniken 2, 5-16-15, NEc SE¼ SW¼. O. G. Murphy's T. C. Murphy 5, 9-16-15, SEc SW¼ SE¼. Pure Oil Co.'s Friend 3, 6-16-15, 200 ft S and E of NWc SW¼ SE¼. Riggs Drlg. Co.'s Wingfield 1, 5-16-15, NEc SE¼ NW¼ SE¼. Roxana Pet. Co.'s H. Murphy 5, 9-16-15, center of south line NW¼ NE¼. Shreveport Oil Corp.'s Murphy B-3, 9-16-15, 150 ft S and 51 ft W of NEc W½ NW¼ SE¼. Standard Oil Co.'s Alphin 22, 2-16-15, 200 ft N and E of SWc; H. Murphy 23, 4-16-15, 260 ft N and 330 ft W of SEc SW¼ SE¼; McClanahan 12, 6-16-15, 330 ft S and E of NWc of S½ Lot 3 in NE¼. Sun Co.'s Hayes 12, 3-16-15, SEc SW¼ NW¼. United Central Oil Corp.'s Murphy 5, 8-16-15, NWc S½ SE¼ SE¼.

OKLAHOMA

Kay County—Marland Oil Co. of Ponca City, No. 5 Fitzgerald, C NW SW NE 1-26-2w; Marland No. 3 Hockstater, C NE NE SW 1-26-2w; Marland No. 4 Hockstater, C SE NE SW 1-26-2w; Marland No. 2 Richmond, C NE SE NW 1-26-2w. Empire Companies of Bartlesville, No. 1 Richmond, C SE SW NW 1-26-2w.

Garfield County—Roxana Pet. Co. of Tulsa, No. 1-W Wolfe, C SE SE NW 13-22-4w. Cosden & Marland No. 14 School land, C NE SE SE SE 13-22-4w (old well deepening); No. 18 School land, C SE SE SE 13-22-4w (old well deepening); No. 25 School land, C E L SE 13-22-4w (old well deepening); No. 37 School land, C SE NE NE 13-22-4w; No. 43 School land, C SE SW SE 13-22-4w; No. 42 School land, C SW SE SE 13-22-4w; No. 44, C SW SW SE 13-22-4w; No. 45 School land, C E½ SE SE 13-22-4w; No. 46 School land, NEc NW NE SE 13-22-4w; No. 46 School land, C NW NW SE 13-22-4w. Sinclair O. & G. Co. of Tulsa, No. 19, N. Walker, C NE SE NE 13-22-4w; No. 26 Denker, C NE NE SW 13-22-4w; No. 20 N. Walker, C SW SW 13-22-4w; No. 27 Belveal, C SE NE NE 24-22-4w; 26 South Walker, C NW NW SE 24-22-4w; No. 21 Kisner, C NE NW NW 19-22-3w; No. 22 Kisner, C SW NW NW 19-22-3w. Champlin Ref. Co. of Enid, No. 34 Beggs, C NE NE SW 24-22-4w. Carlew Drlg. Co. No. 1 Hays, C NW SW NW 5-22-3w. Imo Oil Co.'s No. 3 McLean, C NE SW 31-22-3w.

Payne County—Marland Oil Co. of Ponca City, No. 2 Blue, C SW NW SE 7-18-5. Wheeler & High and others No. 1 Laughlin, NEc SW 11-18-5.

Creek County—Carmen et al's No. 2 Tiger, SEc NE SE 5-15-9 (old well deepening). Harnady et al's No. 1 Smith, SWc NE SE 25-17-7. Shaffer O. & R. Co. of Tulsa, No. 1-A Baugh, SWc NW NE 22-19-9. W. R. Davis No. 1 Sango, NEc NW 7-16-9. O. R. Howard No. 4 McNae, NWc SE NE 16-16-9.

Lincoln County—F. R. Billingslea & Skelly of Tulsa, No. 2 Benton, NWc SW SE 10-16-8. Magnolia Pet. Co.'s No. 3-A Sukovaty, SEc NW SW 5; Magnolia Pet. Co.'s of Dallas, Texas, No. 4 Sukovaty, SE SW NE 3-14-5.

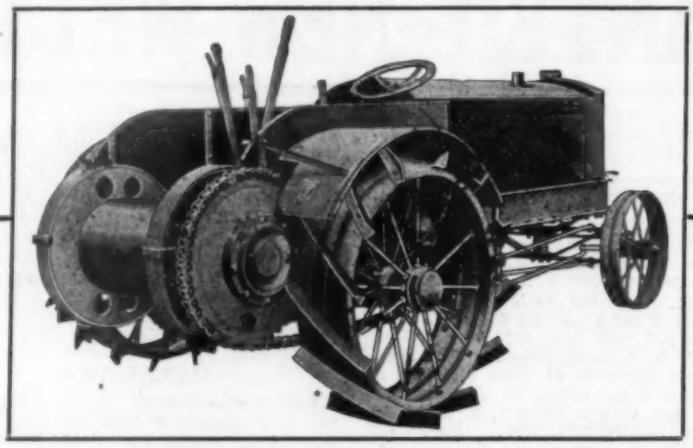
Tulsa County—Sand Springs Home of Sand Springs, No. 1 Unallotted, NWc SW SE 4-19-

Weekly Comparison of New Wells

Following is a condensed table giving a comparison of permits or locations made for new wells in Kansas, Oklahoma, Arkansas, Louisiana, Texas and California:

Number of Wells for Week Ending

	Jan. 23	Jan. 30	Feb. 6	Feb. 13	Feb. 20	Feb. 27	Mar. 6	Mar. 13	Mar. 20	Mar. 27	April 3	April 10	April 17	April 24	May 1	May 8
Kansas	20	9	19	22	29	24	82	24	36	55	34	23	37	38	26	32
Oklahoma	56	56	80	115	96	108	100	94	94	73	115	107	96	82	81	86
Arkansas	20	19	13	29	21	31	30	67	55	80	54	55	34	64	60	49
Louisiana	4	9	25	16	20	14	9	14	14	14	4	9	14	20	7	10
Texas	117	158	187	177	207	133	189	210	218	198	187	214	213	215	147	144
California	18	10	19	19	18	27	12	40	24	36	42	26	28	40	27	26
Total	235	261	298	378	391	337	422	449	441	456	436	434	422	459	348	347



Largest Capacity Tractor Winch With Widest Range of Speed

The Rock Island Model 70 Tractor Winch, manufactured by the Rock Island Plow Co., Rock Island, Illinois, has a capacity of 10,000 pounds pull on a single line. It will handle the rods in any oil well, pull them slowly, stop at any point desired and then go on. Speed can be increased as load decreases.

No bull wheel necessary—pulls tubing directly on the drum—a big saving in dollars and cents.

Complete safety for operator—drum and working lines inside derrick — operator and control mechanism outside. Powerful brakes. Operator faces the well with unobstructed view of the work.

Four cylinder, heavy duty Waukesha motor with friction transmission, Dixie magneto with impulse starter, Stromberg carburetor, air-cleaner, and ball and roller bearings.

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C. F. CAMP COMPANY

Tulsa, Okla.

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Crude Oil Emulsions Successfully Treated

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Electrical Dehydration Process

Analysis, Tests, and Estimates Furnished

PETROLEUM RECTIFYING COMPANY OF CALIFORNIA

308 UNION OIL BLDG.
LOS ANGELES, CALIFORNIA

336 Humble Building, Houston, Texas

11. Echo Oil Co. of Tulsa, No. 1-A Inchoe, NEc SE 34-19-11. H. C. Wilson of Tulsa, No. 5 Postoak, SWc NW 29-19-12. G. W. Webster No. 1 McIntosh, NWc SE 30-19-12. T. O. Lillystrand, No. 2 Childers, SEc SW 34-18-14.

Okmulgee County — Wilcox & Oswalt of Tulsa, No. 4 Anthis, NEc SW SW 1-16-11. Sheldon Oil Co. No. 1 Unallotted. C F L NW SW 20-16-12. Suppese and others of Tulsa, No. 3 Staley, C S L SW SE 35-16-12. Hutchinson and others No. 2 Anderson, NWc SE 35-16-13. S. Bright No. 1-A Lee, C S L NW SW 26-15-12. Vurson No. 1-A Casey, SEc SW NE 32-13-12.

Seminole County — Waite Phillips Co. of Tulsa, No. 1 Williams, C SE NW SW 28-11-8. Sinclair-Houston No. 4 M. Hill, C SW SW SE 28-11-8; No. 3 M. Hill, C NW NW NE 33-11-8. McMann & Magnolia, No. 1 Whitefield, C SW SW SE 34-11-8. Nowata Oil & Ref. Co.'s No. 2 Ida Hill, C NW NW 3-10-8.

Okfuskee County—Amerada Pet. Co.'s No. 4 Harjo, C SW SE SW 36-10-9; No. 5 Harjo, C NE SW SE 26-10-9. McCarty and others No. 1 B. Fisher, C SE SW NE 8-10-12. Skelly Oil Co. of Tulsa, No. 2 Carolina, C SE NW SE 2-9-9.

Stephens County—Ka Wye Drlg. Co., No. 5 Brown, SE SW SE NE 26-1-9w.

Hughes County—P. & R. Corp.'s No. 1 S. Canard, C NW NW NE 28-9-10. Independent & Amerada No. 1 Secrest, C NE SE SW 18-8-10. Independent & Gladys Belle No. 1 Irvine, C SW SE SE 18-8-10; No. 2 Irvine, (location not shown) 18-8-10. Carter Oil Co. of Tulsa, No. 3 Alexander, C NE NE NE 19-8-10.

Carter County—Humble O. & R. Co. of Houston, Texas, No. 1 Gillespie, C NE NE NW 33-1s-3w.

Osage County—F. A. McClintock No. 1, SW NW SW NW 17-20-11. Sand Springs Home of Sand Springs, No. 3, C W L E½ SW 32-30-11. Barnsdall Oil Co. of Tulsa, No. 12, C S L SE NE 23-21-8 (old well deepening). Skelly Oil Co.'s No. 3, C S L SW 11-21-9. Elliott & Smith No. 12, C E L W½ NW 30-21-12 (old well deepening). Pure Oil Co. of Tulsa, No. 3, SW NE SE NW 36-22-8. Tidal Oil Co. of Tulsa, No. 44, C SE NW NW 34-22-10. Superior Oil Co. of Tulsa, No. 5, C E L SW 3-23-8. Peters Pet. Co. of Tulsa, No. 14, NE SW NE SW 4-23-9. The Texas Co. of Houston, Texas, No. 3, NE NW SW 22-24-9. Barnsdall Oil Corp. of Tulsa, No. 3, SE NW SE SW 2-24-11. Mid-Kansas Oil & Gas Co., of Tulsa, No. 3, SW NE 33-25-11. I. T. I. O. Co. of Bartlesville, No. 1, SE NW 33-25-11. Carter Oil Co. of Tulsa, No. 5, C SW NE NE 20-26-6. Lewis Oil Co. No. 6, C SW NE NE 21-26-6. LeWright and others No. 1, NW SW 20-27-5. Carter Oil Co. No. 14, C SW NE NE 13-27-5; No. 15, C NW NE NE 13-27-5; No. 16, NEc 13-27-5.

Muskogee County—Sterling No. 2 S. Barnett, NEc SE 19-12-14. E. J. Lambert, No. 1 Manuel, SWc NW NE 16-13-15. Magnolia Pet. Co. of Dallas, Texas, No. 3 Rentie, SWc SE 11-14-14. H. L. Holly No. 4 Jolly. No. 4 M. Callahan, SWc N½ SE NW 11-14-15.

KANSAS

Butler County—Callahan, Dingee et al's No. 1 Ferrier, northwest corner 26-23-4. Joe Liggett et al's No. 1 Moffett Bros. southwest corner lot 22, section 18-25-8. John Rogers' No. 1 Drum Bitler, southwest corner of the northwest of 29-26-8.

Cowley County—Wagner et al's No. 1 Erickson, center of the northeast of the northwest of the northeast of 5-30-8. Arkansas Fuel Oil Co.'s No. 1 Wilson, southeast corner of the northeast of 9-32-3. Stanley et al's No. 1 Carson, northeast corner of the northwest of 30-32-3. Marland Oil Co.'s No. 1 B. Graham, southeast corner of the southwest of the northeast of 9-33-3.

Elk County—Able & Byington's No. 1 Finley, northwest corner of the southwest of the northeast of 22-31-11.

Greenwood County—Theta Oil Co.'s No. 10 Browning, northeast corner of the northwest of 17-22-10. Sinclair O. & G. Co.'s No. 19 Browning, southwest corner of the northeast of the southeast of 19-22-10; No. 18 Browning, northeast corner of the northwest of the southwest of 20-22-10. Phillips Pet. Co.'s No. 1 Hammer, southeast corner of the northwest of 30-22-10. Dave Alyard et al's No. 4 De

Exterior View

WAREHOUSE in South Liberty Field 80 x 30 ft. with 8 ft. wide Loading Platform under Shed Roof

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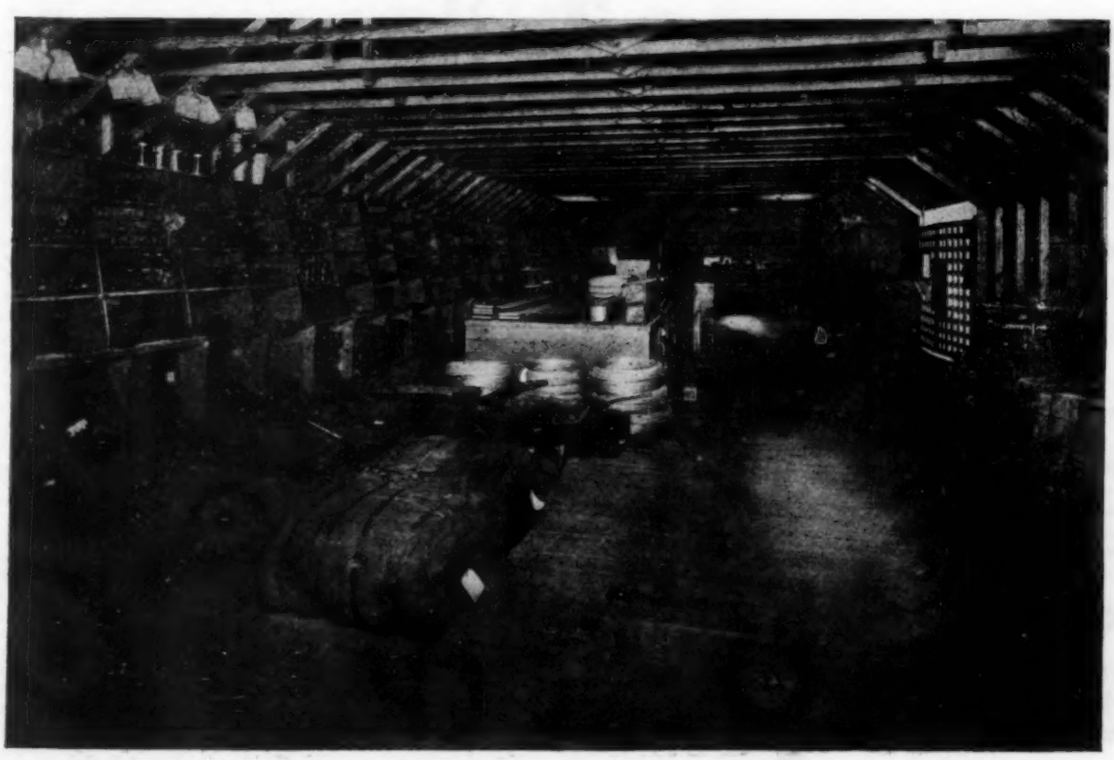

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Interior View

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Malorie, southwest corner of 7-22-11. York State Oil Co.'s No. 11, O'Neil, northeast corner of the northwest of the southeast of 32-22-11. J. B. Murphy et al's No. 5 Green, northeast corner of the northwest of the southwest of 2-23-9. Roth & Mission Oil Co.'s No. 49 Thrall, center of the southeast of 29-23-10; No. 50 Thrall, center of the east line of the west half of the southwest of 29-23-10. Mid-Kansas Oil & Gas Co.'s No. 25 Martindale, southeast corner of the southwest of the northwest of 31-23-10; No. 26 Martindale, southeast corner of the northeast of the southwest of 31-23-10. Arkansas Fuel Oil Co.'s No. 4 Burris, center of the southwest of the southeast of the southwest of 20-23-13; No. 12 Beys, center of the southwest of the northeast of the southwest of 29-23-13. Roxana Pet. Corp.'s No. 4 Marshall, northeast of the southeast of the northwest of 34-24-9. Franklin Oil Co.'s No. 3 Fleming, southwest corner of the northeast of the northeast of 15-24-12; No. 2 Johnson, northwest corner of the southwest of the southeast of 15-24-12. Lime Iola Oil Co.'s No. 3 Johnson, center of the south line of the northeast of the southwest of 15-24-12. Pierce et al's No. 1 Waushing, northwest corner of the southwest of the southwest of 23-26-9. Cosden Oil & Gas Co.'s No. 1 Freeman, northwest corner of the southeast of the southwest of 3-27-12.

Lyon County—R. W. Talbot's No. 1 Bradfield, northwest corner of the northeast of 25-21-10.

Russell County—Derby Oil Co.'s No. 1 Sutton, southwest corner of the northwest of the southeast of 5-12-15w. Muddy Oil Co.'s No. 2 Kollman, northeast corner of the southwest of the northwest of 5-12-15w. Midwest Refining Co.'s No. 36 Oswald, southeast corner of the northwest of 8-12-15w.

Sumner County—Marland Oil Co.'s No. 1 Norris, center of the northeast of the northwest of the southeast of 27-34-2e.

TEXAS

Archer County—Phillips Pet. Co.'s, Bartlesville, Okla., M. White 66, blk 35, Amer. Trib. sur. Ramming & Saunders', Staley Bldg., Wichita Falls, Texas, L. F. Wilson 6, blk 23, Amer. Trib. sur, 350 ft N No. 2. Camp Oil & Gas Co.'s, City Nat. Bank Bldg., Wichita Falls, Texas, H. Wilmon 6, sec 24, S. P. Ry sur, 760 ft E and 450 ft to S line; L. F. Wilson 5, blk 27, Amer. Trip. sur, 300 ft E No. 3. Wichtex Prod. Co.'s, City Nat. Bank Bldg., Wichita Falls, Texas, J. T. Richardson 5, blk 10, S. Anderson sur, center; L. F. Wilson 3, sec 29, Amer. Trib. sur, 350 ft S No. 1. Panhandle Ref. Co.'s, Wichita Falls, Texas, L. F. Wilson 7, blk 2, Amer. Trib. sur, 300 ft W No. 3. Scott & Gose's, Wagoner Bldg., Wichita Falls, Texas, Mrs. N. J. Parrish , sec 2, S. P. Ry sur, 450 ft E and 150 ft to S line. R. R. Robertson's, Box 434, Wichita Falls, Texas, A. J. Lowe 3, I. Holman, 150 ft to S and W lines; A. J. Lowe 2, I. Holman sur, 600 ft W No. 1. Texas Co.'s Wichita Falls, Texas, C. L. avis 12, J. A. Hopkins sur, 600 ft to E and 922 ft to N line; J. T. Richardson 3, S. Anderson sur, 150 ft to E and 550 ft to S line. A. T. Wolf & Son's Staley Bldg., Wichita Falls, Texas, W. H. Chilson 4, blk 24, D. C. S. L. No. 4, 300 ft E No. 3. Fisher & Gilliland's, City Nat. Bank Bldg., Wichita Falls, Texas, J. F. Rogers 5, 2407 TE&L sur, 300 ft E No. 3. Prairie Oil & Gas Co.'s, Ranger, Texas, L. F. Wilson 10, B 27, Amer Trib sur, 490 ft to N and 150 ft to W line. Shappell Oil Co.'s, Wichita Falls, Texas, J. L. Jackson 20, B 23, D. C. S. L. sur No. 4, west of No. 19. United Central Oil Corp.'s, Wichita Falls, Texas, J. F. Rogers 9, 2407 TE&L sur, north of No. 4. Lincoln & Norwood's, Wichita Falls, Texas, M. Rutty 1, J. O'Reilly sur, 200 ft to W and 970 ft to S line. L. T. Burns', First Nat. Bank Bldg., Wichita Falls, Texas, J. H. Turbeville 1, B 24, J. C. S. L. sur, 1320 ft to N and E lines. Mrs. H. B. Wallace's, Wichita Falls, Texas, Kemp & Kempner 36, S 2, S. P. Ry sur, 630 ft NE No. 27. Atlantic Oil Prod. Co.'s, City Nat. Bank Bldg., Wichita Falls, Texas, W. F. Parrish 8, S 26, H&TC Ry sur, 150 ft to N and W lines; L. F. Wilson 7, S 31, Amer Trib sur, 300 ft N No. 4; 5, S 27, Amer Trib

sur, 360 ft N No. 4. Roy I. Carter's, City Nat. Bank Bldg., Wichita Falls, Texas, C. Conway 1, B 41, J. C. S. L. sur, 150 ft to S and E lines. Wirt Franklin's, Ardmore, Okla., W. F. Parrish 9-B, S 26, H&TC Ry sur, 300 ft N No. 8. Geo. L. Pace's, Staley Bldg., Wichita Falls, Texas, Mrs. E. F. Watts 1, 2417 TE&L sur, 150 ft to S and E lines. Clark Oil Co.'s, F. & M. Bank Bldg., Ft. Worth, Texas, L. F. Wilson 1, B 23, Amer Trib sur, 907 ft to W and 150 to S line. Young Bros. & Kennedy's, Bradford Bldg., Wichita Falls, Texas, J. R. Cody 1, B 156, Club Ranch sur, 150 ft to N and E lines.

Atascosa County — Witherspoon Oil Co.'s, San Antonio, Texas, Wills & Jordan 4, No. 520 sur, 500 ft W Na. 3; 5, same sur, 300 ft N No. 1; R. A. Langley 5, J. Sharp 518 sur, 500 ft S No. 4.

Brown County—A. J. Baker's, Zephry, Texas, H. Bynum 1, Jas. Grant sur, NE Cor. Prairie Oil & Gas Co.'s, Ranger, Texas, G. B. Gaines 5, Wm. Miller sur, 855 ft W No. 1.

Bexar County — Humble Oil & Ref. Co.'s, Houston, Texas, Cassin 1, F. Rodriguez sur; Caroth 1, Stafford sur.

Brazoria County—A. Underwood Co.'s, Houston, Texas, A. Underwood 1, Geo. Tennille sur 2, same sur; McGregor-Underwood 7, same sur, 46 ft to N and 121 ft to E line; 8, same sur, 60 ft to N and 167 ft to E line. Humble Oil & Ref. Co.'s, Houston, Texas, Tyndall-Wyoming 14, M. Varner sur, 470 ft to S and 50 ft to W line.

Callahan County—Warren & Hayes', Box 272, Cisco, Texas, C. E. Pippin 1, 3159 TE&L sur, 150 ft to S and W lines; B. J. Camp 1, same sur, 1458 ft to N and 150 ft to W line. Shackleford Oil Co.'s Putnam, Texas, J. A. Shackleford 16, 2270 TE&L sur, 500 ft to S and E lines. C. H. Wiles', Putnam, Texas, J. R. Morgan 1, S 18, Bayland Asy sur, 925 ft to N and 150 ft to W line. Wittner Property Trustees', Putnam, Texas, Mrs. R. D. Williams 20, S 1, T&P Ry sur, 400 ft N No. 19. Mowtray Oil Co.'s, Cisco, Texas, T. H. Weddington 9, S 4, Bayland Asy sur, 350 ft N No. 2. Breman & Polsky's, Putnam, Texas, J. T. Reilly 1, S 3, Bayland Asy sur, 150 ft to N and W lines. Cupp & Richards', Putnam, Texas, Mrs. R. D. Williams 5, 2298 TE&L sur, NE cor; 6, same sur, 300 ft N No. 4. Davis-McKee Co.'s, Vernon, Texas, W. H. Jobe 6, S 11, Bayland Asy sur, NE Cor. Godley Oil & Gas Co.'s, Henrietta, Texas, R. L. Buchanan 17, S 8, Bayland Asy sur, 300 ft W No. 1. Goodloe & Harris', Putnam, Texas, S. M. Davis 15, S 4, Bayland Asy sur, 450 ft to E in center of line; 16, same sur, 300 ft N No. 15. W. S. Hines, Baird, Texas, J. E. Dunnaway 2, S 3, GC&SF Ry sur, 450 ft to Sand W lines. J. C. McNeill's, Southwestern Life Bldg., Dallas, Texas, W. A. Kile 2, S 2, Bayland Asy sur, 155 ft to N and E lines. Rattblatt & Medler's, Cisco, Texas, R. Clark 1, S 17, D&D Asy sur, 460 ft to N and 600 ft to E line. E. Bachnes et al's, 727 Essex St., Ft. Worth, Texas, M. Kennedy 1, S 11, Bayland Asy sur, NE Cor. Kent, Duke & Davis', Box 427, Burkburnett, Texas, W. M. Isenhour 1, 2299 TE&L sur, 150 ft to N and E lines.

Caldwell County — Mills Bennett's, Second Nat. Bank Bldg., Houston, Texas, Mrs. M. L. Brewer 2, P. Martinez sur, 300 ft NE No. 1; 3, same sur, 300 ft NW No. 1; 4, same sur, 300 ft NE No. 2; 5, same sur, 300 ft NW No. 3. Quaker Oil Co.'s, Austin, Texas, Palmer 2, Castillo sur, NW cor; 3, same sur, south of No. 1. Lucy Petroleum Co.'s, Magnolia Bldg., allas, Texas, Mrs. H. E. Palmer 2, F. Castillo sur, 150 ft to N and E lines. Gulf Production Co.'s, Houston, Texas, C. H. Beaty 1 ,J. Burleson sur, 155 ft to S and 150 ft to E line. D. S. Golding's, First Nat. Bank Bldg., Wichita Falls, Texas, H. E. Palmer 1, P. Martinez sur 150 ft to S and E lines.

Comanche County—H. P. Bailey's, Box 69, Oaklawn, Ft. Worth, Texas, W. H. M. Haile 14, BF&M sur, 300 ft W No. 9.

Coleman County—Jordan, Jamieson & Ocean Oil Co.'s, Box 147, Coleman, Texas, Y. C. Boyle 1, No. 168 A. Wickson sur, 400 ft to W and 150 ft to S line.

Duval County — O. W. Killam's, Laredo, Texas, Cole Pet. Co. 3, S 11, M. Arispe sur,

Devil's Steel Hand

Note the Junk this Hole Contained!

and Yet the Devil's Steel Hand Cleaned It Out

In attempting to re-open Gypsy Oil Co.'s Yarhola No. 1, which had been shut down, the crew found it impossible to get past the liner.

The impression block showed miscellaneous small pieces in the hole and a Devil's Steel Hand was sent down to remove them.

These are the articles that the tool fished out:

A piece of chain 1 foot long off a B-jaw chain tong.

A 4¾-inch Larkin Sand Pump Bottom.

A piece of 2-inch pipe, 2½ feet long which had been used as a tool brace.

This junk, according to Mr. Fesemyer, had all been thrown into the hole while shut down.

In the face of such experiences, do you blame us for calling the Devil's Tools the most amazing fishing tools ever devised? Immediate shipments. Prices on request.

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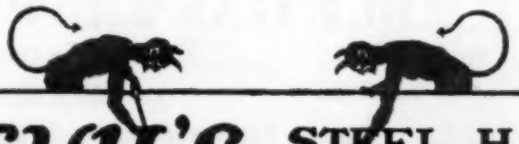

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That can be reversed without turning over
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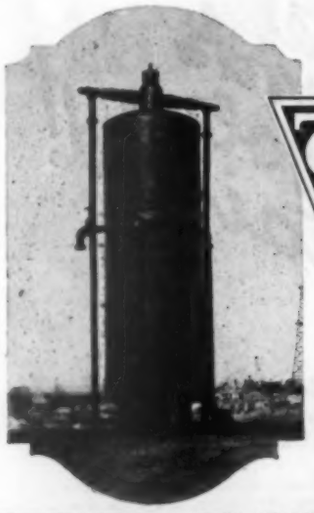

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All Pioneer Oil Well Shooters

450 ft to W and 150 ft to S line; 2, same sur, 200 ft to S and 150 ft to E line.

Eastland County—Magnolia Pet. Co.'s, Dallas, Texas, Chas. Allman 3, M. Finch sur, SE Co. Edwards & Galloway's, Ranger, Texas, W. M. Spicer 1, S 2, T&NO Ry sur, NW Cor. Shackleford Oil Co.'s, Putnam, Texas, J. A. Shackleford 16-A, 2270 TE&L sur, 450 ft to E and 500 ft to S line.

Freestone County—Humble Oil & Ref. Co.'s, Houston, Texas, E. C. Crouch 3, R. B. Longbotham sur, 257 ft to E and 50 ft to S line; O. Pope 1, same sur, 56 ft to E and 64 ft to S line.

Fort Bend County — Gulf Production Co.'s, Houston, Texas, B. Blakely 11, E. rew sur, 250 ft N No. 10. Union Sulphur Co.'s, Humble Bldg., Houston, Texas, T. W. Davis 21, M. Young sur.

Harris County—R. C. Ely's, Cotton Hotel, Houston, Texas, Kansas City Gulf Co. 1, D. Harris sur, 400 ft to N in center of line. Valley Oil Corp.'s, Chronicle Bldg., Houston, Texas, W. H. Valentine 1, J. Holloway sur, 1200 ft to N and 3750 ft to W line.

Hardin County—Yount-Lee Oil Co.'s Beaumont, Texas, S. W. Gilbert 1, S. Jackson sur, south central. Lake View Oil Co.'s, Sour Lake, Texas, Hardin Co. Oil Co. 43, S. Jackson sur, 180 ft NE No. 42.

Jim Hogg County—Henne, Winch & Farris', Laredo, Texas, A. Martinez 2, 256 sur, B 1? and 14, 344 ft S No. 1.

Kleberg County—Humble Oil & Ref. Co.'s, Houston, Texas, Cross State 2, State Land, 360 ft NW of Kine No. 1.

Liberty County—Humble Oil & Ref. Co.'s, Houston, Texas, Pickett 6, M. G. White sur 50 ft to N and 206 ft to W line; Chambers 5, same sur, 50 ft to N and E lines. J. F. Bashara's, Keystone Bldg., Houston, Texas, E. W. Pickett 2, M. G. White sur, SW Cor; 3, same sur, NE Cor; 4, same sur, SE Cor; 5, same sur, west central. Vacuum Oil Co.'s, 214 Gulf Bldg., Houston, Texas, Barrett 8, M. G. White sur. Gulf Production Co.'s, Houston, Texas, J. Hammon 3, M. G. White sur, 265 ft E No. 2; O. A. Schade 8, D. Minchey sur, 250 ft W No. 7; Phoenix Dev. Co. 31, J. Devore sur, 849 ft to S and 300 ft to W line.

Milam County—Clear Lake Oil Co.'s, Rockdale, Texas, H. T. Coulter 1, T. S. Arnett sur, 150 ft to N in center of line. J. E. Lee et al's, Minerva, Texas, L. Isaacs 1, T. J. Chambers sur, north central.

Navarro County—R. H. Chew's, Box 488, Corsicana, Texas, Moore & Banks 1, J. Beauchamp sur, 400 ft NW of SE cor. Sun Oil Co. of Dallas, Texas, A. Hillburn 1, M. Boren sur, 450 ft to N in center of line.

Orange County—K. Kishi's, Terry, Texas, W. P. McGuire 6, Garner sur, 40 ft to W and 112 ft to S line. Gulf Production Co.'s, Houston, Texas, O. Chesson 4, Wm. Dyson sur, 25 ft to N and W lines.

Reagan County — Krupp & Pickrell's, Big Lake, Texas, University 14, S 36, B 9, 250 ft to N and W lines.

Shackelford County — Phillips Pet. Co.'s, Bartlesville, Okla., Parrish 3, S 47, Blind Asy sur. W. R. Loggie's, Albany, Texas, M. Black 2, 506 TE&L sur, 1821 ft to W and 1034 ft to N line. W. H. Kirby & Son's, Moran, Texas, A. McLaury 1, S 88, Univ. Lands, south central. C. H. Helf's, Electra, Texas, C. F. Brown 2, S 67, L. A. L. sur, 450 ft to N and 750 ft to W line. Shertzer Bros., Cisco, Texas, Cook 2, S 19, Univ Lands sur, 300 ft E No. 1.

Stephens County—L. M. Pardee's, Breckenridge, Texas, W. F. Ramsey 1, S 446, S. P. Ry sur, 1690 ft to W and 155 ft to S line. Texas Co.'s, Breckenridge, Texas, H. M. Hammil 3, S 5, L. A. L. sur, 1000 ft to N and 1274 ft to E line. Texas Pacific Coal & Oil Co.'s, Ranger, Texas, T. L. Adams 7, S 77, T&P Ry sur, NW Cor; P. P. Pierce 4, S 75, T&P Ry sur, 1875 ft to W and 335 ft to N line. Republic Prod. Co.'s, Houston, Texas, M. C. Knox 6, S 10, T&P Ry sur, 1000 ft NE No. 1. Moorman et al's, Ranger, Texas, J. T. McCleskey 1, S 65, T&P Ry sur, 220 ft to S and W lines.

Throckmorton County — Katherine Ryan's Joline Hotel, Wichita Falls, Texas, Polk County 1, S 28, P. C. S. L. sur.

Wichita County — Dale Oil Co.'s, Wichita Falls, Texas, G. Jennings 10, S 13, HT&B Ry

sur, 250 ft to E and 450 ft to S line. T. O. Shappell & Sons', Wichita Falls, Texas, Kemp & Kempner 1, B 51, W. V. F. L. sur, 450 ft to S and 150 ft to W line. Texas Co.'s, Wichita Falls, Texas, Kemp & Allen 5, S 8, W. V. F. L. sur, 150 ft to S and E lines. W. L. Mann's, 710½ Ohio St., Wichita Falls, Texas, Rolle Est. 5, J. Jackson sur, 300 ft W No. 3. Texhoma Oil & Ref. Co.'s, Wichita Falls, Tex., S. B. Burnett 8, S 5, SA&MG Ry sur, 50 ft S No. 7. Consolidated Oil Co. of Texas', Wichita Falls, Texas, Mrs. P. Smyth 1, B 4, E. T. Ry sur, 150 ft to N and W lines. G. W. Whitman's, Box 1516, Wichita Falls, Texas, H. Willis 9, BBB&C Ry Co. sur, 600 ft W No. 1. Maer & Staniforth's, City Nat. Bank Bldg., Wichita Falls, Texas, J. & J. Waggoner 1, B 2, Waggoner Bros. sur, 150 ft to S and W lines. J. W. Duncan's, Wichita Falls, Texas, D. Hobson 1, B 2, GC&SF Ry, 150 ft to N and E lines. Palestine Petroleum Co.'s, Palestine, Texas, L. B. Wells 1, Wm. Lloyd sur, 150 ft to S and E lines. J. L. Swanner's, Box 768, Wichita Falls, Texas, Williams & Parker 1, B 3, M. Ramsey sur, 1326 ft to N and 1250 ft to E line. Underwood Drilling Co.'s, Morgan Bldg., Wichita Falls, Texas, J. R. Pace 2, S 118, J. R. Scott sur, 4248 ft NW No. 1. Helene Oil Corp.'s, Staley Bldg., Wichita Falls, Texas, Ferguson 10, J. T. Lewis sur, 465 ft to W and 150 ft to S line.

Wilbarger County — Texas Co.'s, Wichita Falls, Texas, W. T. Waggoner 300, S 14, N. Keys sur, 500 ft S No. 299. C. F. Kolp's, Electra, Texas, W. T. Waggoner 8, S 99, H&TC Ry sur, 150 ft to S and E lines. Humble Oil & Ref. Co.'s, Wichita Falls, Texas, W. H. Stephens 23, S 83, H&TC Ry sur, 150 ft E No. 4; 23, same sur, 150 ft E No. 23; 25, same sur, 50 ft E No. 24; 26, same sur, 50 ft S No. 5; 27, same sur, 50 ft N No. 10. Consolidated Oil Co. of Texas', Wichita Falls, Texas, W. T. Waggoner 2, S 7, H&TC Ry sur, 150 ft to W in center of line. C. F. Kolp's, Electra, Texas, W. T. Waggoner 7, S 99, H&TC Ry sur, east of No. 6.

Wilson County — Rosalie Oil Co.'s, Gibbs Bldg., San Antonio, Texas, R. E. Moore 1, C. W. Parrott sur, 375 ft to N and 315 ft to E line.

Young County—Lea & Daniels', Box 744, Wichita Falls, Texas, G. W. Vernon 1, J. Poitevent sur, 450 ft to E and 150 ftto S line. Polk Anderson et al's, Olney, Texas, J. P. Dunagan 1, 170 TE&L sur, 150 ft to S and E lines. Humble Oil & Ref. Co.'s, Wichita Falls, Texas, B. Schlegel 15, S 1, BBB&C Ry sur, 340 ft S No. 11; 16, same sur, 360 ft S No. 15; 17, same sur, 315 ft S No. 16; 18, same sur, 300 ft S No. 10. F. H. E. Oil Co.'s, Staley Bldg., Wichita Falls, Texas, Smith & Groves 1, 161 TE&L sur, 150 ft to S and W lines.

150-Barrel Producer Opens New Texas Panhandle Area

Amarillo, Texas.—The completion of the Amarillo Oil Company's wildcat test on the J. C. Warrick land in Potter County with an initial production of 150 barrels from granite wash and sand formation at 3080-3100 feet establishes a new oil producing area in the Panhandle district of Texas. This well is located in the northwest quarter of section 16, block Y-2, and encountered the usual heavy gas production in the lime horizon. A light spray of oil was passed up at 2920-21 feet.

A second oil producer in the Whittington pool in Wheeler County section of the Panhandle district is in prcess of completion this week. Jim Whittington's Williams & Laycock 3, located in the northeast quarter of section 9, block 27, and several locations northwest of the discovery well of the pool, is reported spraying a small amount of oil while drilling into the sandy-lime pay at 2200 feet.

Eclipse Deepwell Pulling Machine

	Weight
Safety Standard up to 2000 ft. 2" Tubing Weight	3075
Safety Special up to 3000 ft. 2" Tubing Weight	3385
	Weight
Eclipse Std. up to 2000 ft 2" Tubing Weight	2785
Eclipse Special up to 3000 ft. 2" Tubing Weight	3000
Eclipse Deepwell up to 8000 ft. 2" Tubing Wt.	3645

Wreckers also made to order, approximate weight 5000 lbs. One of our customers stated that he has pulled a weight equal to 100 tons with one of these machines.

Specifications Deep Well

Mast 8x10x36 ft., Douglass Fir A-Style, Two Wheel Truck, two 16" Bronze bearing crown pulleys, 2¼ Steel Pin mounted in malleable boxings. Large supporting plate 16" dia. between crown pulleys, eliminating any chance of bending pin.

Reel or Drum: 32 lb. 8¼ casing filled with concrete for winding drum, differentials banded with 3/16 band iron, brake surface 6"x40", choke brake style same as star drilling machine.

The whole reel assembly is mounted on 2¾ square steel shaft extending clear through reel, secured by three heavy castings.

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WILDCATS FROM ALL SECTIONS

Big Lake Takes Rank as Third Largest Texas Field

San Angelo, Texas.—The Big Lake oil field in Reagan County section of West Texas jumped to third place in production ranks of Texas fields during the week ending May 9. with a daily average of 29,125 barrels from 18 flowing and four pumpnig wells, while two other completed pumpers were off production. This field has sufficient proven flush area to become the largest high gravity field in the Mid-Continent district within 90 days, but the limited pipe line, tank car and field storage facilities for handling the oil forestalls any possibilities of it taking the lead of the Mid-Continent. Another big gain in daily average production is scheduled for next week, as the field was doing about 32,000 barrels early this week, with a new well in process of completion, and seven other tests due for completion within two weeks.

Recent completions in the Big Lake field have been mostly confined to the lease dividing line separating the properties of the Texon Oil and Land Company and the Big Lake Oil Company, and all wells have registered a big flush yield. The comparatively slow rate of production decline of these wells has enabled the field to rise into the major class of the Mid-Continent district on short notice from a few wells, and the entire absence of water or cut oil in all the wells completed since the two companies adopted the policy of cementing the string of 6⅝-inch casing near the production horizon contributes to a higher crude yield per well.

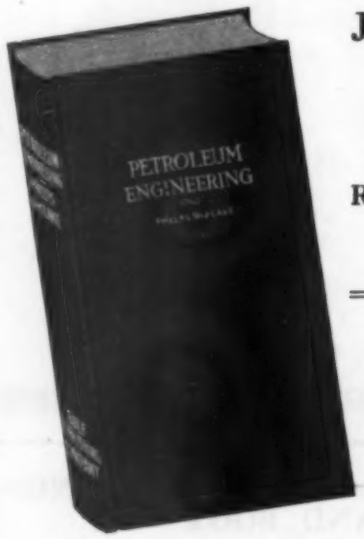
Since the Texon Oil and Land Company has only one section—640 acres—located in the proven flush area, the original plans to drill only one well to 40 acres has been abandoned, so both the Texon and Big Lake Companies have launched a development campaign that will drill every available location on their lease dividing line, with a distance of 500 feet between offset wells. The new locations made by the Big Lake Oil Company last week ran its total number of staked locations in the field up to 46, while the Texon Company's new locations will run its total to about 30. Both companies will then have a great number of inside locations to drill later on to maintain their production in proportion to crude contracts.

Another dry hole for Crockett County was in sight early this week when J. S. Cosden and associates' wildcat test on University land in section 34, block 12, reached a depth of 3115 feet without showing for a producer. This wildcat is about 12 miles southeast of the Big Lake field, and is to be drilled to a lower level before plugging. The Hoffman and others have announced a second location to be drilled on their wildcat block of University leases in block 11, Reagan County, after abandoning their first test several weeks ago at 3200 feet in section 23, block 11. The second test will be drilled 400 feet south and wst of the northeast corner of the NE SW section 15, block 11. The next wildcat completion scheduled from Reagan County is the Gulf Production Company's University 1, located in the northwest corner of section 1, block 1, and about five miles due south of the Big Lake field. This wildcat is drilling red sand at 2765 feet, and logged the salt bed at 1405-1925 feet.

Oil at Four Levels on Nacoma Lease of Texhoma

Wichita Falls, Texas.—Four separate oil producing horizons have been uncovered by the Texhoma Oil and Refining Company on its N. J. Howard lease in the Nocona shallow field in upper Montague County from as many different tests drilled in a row at close interval. Texhoma's Howard 4 drilled oil sand last week at 1599-1631 feet, and filled up about 1400 feet of oil testing 28½ gravity, with some gas showing. This well gives promise of being the best producer in the field, and is rigging up to pump. Texhoma's first test on the Howard lease was completed last September pumping 50 barrels at 821-855 feet, and the second test drilled one location to the south pumped 90 barrels initial at 988-1002 feet, while the third completion was a 45-barrel pumper at 1361-97 feet.

Bruce Larkin and Panhandle Refining Company's wildcat producer on the Richards land in Throckmorton County has increased its oil production following the slipping of the casing into the oil sand pay, thereby shuitting off some of the water. This well drilled oil sand several weeks ago at 1831-34 feet, and was estimated good for about 25 barrels of oil and four times as much water, but the oil production is now estimated at about 240 barrels daily and the water has decreased. Hoffer Oil Corporation's wildcat test on the Richards land is spraying some oil and water while making one million cubic feet of gas from sand at 855 feet.



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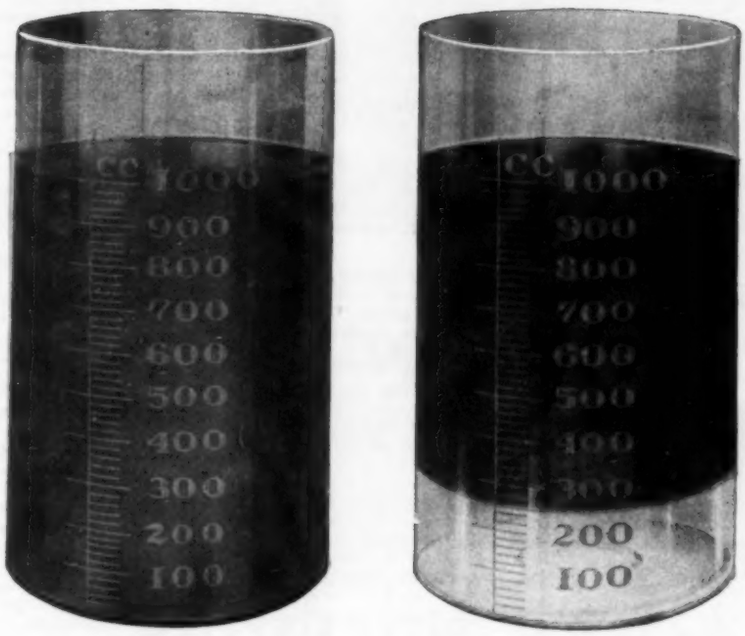

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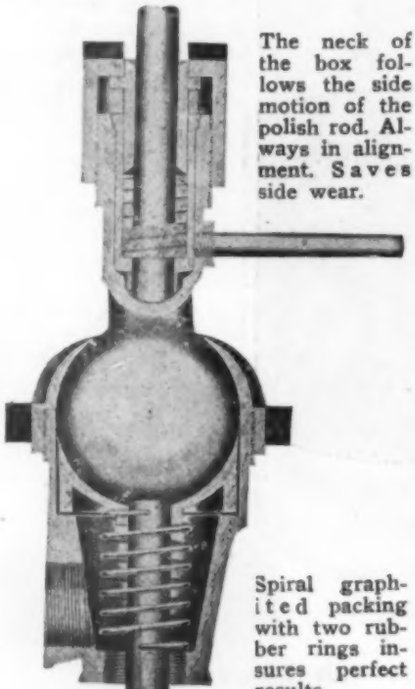

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Coastal Wildcats

COMPLETIONS

Company, Well and Location	Initial Production Bbls.	Depth
Matagorda County—		
Rycade Oil Corp.'s Gray 2	*	4242
Galveston County—		
Gulf Prod. Co.'s Geo. E. Smith 2..	1500	3250
Fort Bend County—		
Marland Oil Co.'s Lockwood 2....	*	1020

DRILLING REPORT

BRAZORIA COUNTY—D. F. Bryan Production Co. & Hamm et al's Bryan 1, at Freeport, J. G. McNeel sur, dr 3700 ft. Z. Gayle et al's Gayle & Dunsmoor 2, W. J. Russell sur, ¾ mile E No. 1, 6 miles S Angleton, sd; Mrs. J. Boyd 1, W. J. Russell sur, 50 ft to W and 150 ft to S lines, dr 1450 ft.

BRAZOS COUNTY—Bryan Pet. Co.'s Watthuber 1, 2 miles S College Station, C Burnett sur, sd at 2500 ft.

CHAMBERS COUNTY—Sam J. Hindman's Bullock Collier 1, Collier 200-acre lease, Griffith league, 2891 ft to W and 60 ft to S line, temp. abn. C. T. Rucker's No. 1, reported dr below 1610 ft.

FORT BEND COUNTY—Gulf Prod. Co.'s Moore 4, bailing at 1150 ft, cored fair sand at 1138-1150 ft. Marland Oil Co. of Texas' Lockwood 2, abn in clay at 1020 ft; Meier 1, Meier tract, dr 800 ft; J. R. Spencer 1, T. Westfall survey, 900 ft to N and 650 ft to W line, rigging up. Neilan Oil Co.'s B. Frederick 1, 4½ miles W Rosenberg, Sec. 19, S. George sur, NW cor, sd. Pathfinder Oil Co.'s Pinkney 1, T. F. Pinkney sur, 400 ft NE of N cor sec 111 and 300 ft NE of E cor of sec 101, 1 mi. E Davis & Co. 2, dr 2700 ft, Jas. W. Rich et al's Moore-Hager 2, at Big Creek, 300 ft NE No. 1, SE side of dome, dk. Rycade Oil Corp.'s Fritz Meier 1, 800 ft E of SW cor and 200 ft N of S line of Fritz Meier 207.7 acre tract, installing heavy rig; Moore 1, 3000 ft NE and 5000 ft NW of SW cor J. M. Moore 1564 acre tract, George Dedrick sur, dr 780 ft; Nash 1, 2600 ft E and 200 ft S of NW cor Capt. Nash's 200 acre lease, dr 4180 ft.

GALVESTON COUNTY—Gulf Production Co.'s George E. Smith 2, at High Island, completed for 1500 barrels grade "B" coastal oil at 3250 ft.

GRIMES COUNTY—J. E. Cuthrell's Ruth 4, NE of Carlos, dr; No. 3, near Carlos, sd at 3500 ft; No. 5, (shallow test) dr. L. F. McCausland's G. W. Dodd 1, 3 miles W Iola, 150 acre tract, Dodd farm, Timothy Jones league, dr.

HARRIS COUNTY—The Texas Co.'s Warren 1, 3 miles S Hockley, 400 ft NE Staiti 17, 10 degrees to east of line through Nos. 13, 15 and 17, dr 3670 ft; Warren 3, 750 ft NW No. 2, 1670 ft.

JACKSON COUNTY—Houston Oil Co.'s Rose & Sample 1, 7 miles W Edna, Rose & Sample land, dr 1540 ft; Westhoff 2, 1650 ft N and 50 ft W of NE cor George Hecht 200 acre tract, Pedro Gallardo sur, set surface cas at 156 ft. Vanderbilt Petroleum Co.'s Seliner 1, 4 miles N Vanderbilt, C. W. Hall subdivision of Harwood Burns ranch, sd at 2720 ft. Jackson County Oil Synd.'s Drushell 3, 7 miles NW Edna, on Horseshoe lake, dr below 2510 ft.

JEFFERSON COUNTY—Houston Oil Co.'s Pipkin 10, 934 ft S Pipkin 5, Pipkin sur, dr 2950 ft; Sun-Davis 2, Seth Davis tract, 50 ft NW No. 1, dr 1662 ft. Paggi Bros.' Wilson Hdw. Co. 1, ¾ mile SW Miller 1, dr.

LIBERTY COUNTY—Sinclair Oil & Gas Co.'s Condit Fee 1, David Minchey league, 800 ft W of line due S from Gulf's Van Deventer 1, dr 3504 ft.

MATAGORDA COUNTY—Marland Oil Co. of Texas' Murphy 1, Jeremiah Dwyer sur, dr 5400 ft. Rycade Oil Corp.'s Gray 2, 600 ft N of S line and 1400 ft W of E line blk 2, abn in salt at 4242 ft. Sheppard Mound Oil Co.'s Hawkins 2, offset to Marland's Murphy 1, 3000 ft E Commonwealth Oil Co.'s Hawkins 1, 1000 ft SE No. 2, resumed dr at 1300 ft.

WHARTON COUNTY—Gulf Prod. Co.'s Felder 3, 20 ft to W and 1735 ft to N line of blk 3, S. Ingram sur, dr 4200 ft. Texas Co.'s Taylor 1, at Boling, Taylor land, dr 1300 ft.

East Central Texas Wildcats

COMPLETIONS

Company, Well and Location	Initial Production Bbls.	Depth
Fannin County—		
Lester Pet. Co. S. D. Graves 1....	*	3015
Henderson County—		
Fred E. Haynes et al's E. G. Bounds 2 (H. Jeffreys sur)	†	2000
Hunt County—		
Marland Oil Co. Bauknight-Fee 1, (Jas. Hamilton sur)	*	3745
Limestone County—		
Pure Oil Co. J. W. Webster 1....	*	3620

DRILLING REPORT

FALLS COUNTY—Reiter-Foster Oil Corp. et al's L. T. Williams 1, (J. W. Robinson sur) sd indefinitely 879 ft. Harrison-Bletch & Thompson's B. & T. 1, (W. A. Mitchell sur) Austin chalk 2582-2869 ft, set 6⅝ cas 3220 ft, dr 3250 ft.

HUNT COUNTY—Sam Tallal & C. A. Kelsey's J. W. Barnett 1, (Alex Smith sur) sd top Austin chalk 1997 ft.

HOPKINS COUNTY—Kellogg & Roxana Pet. Corp.'s Dollie Cork 1, (R. E. Matthews sur) Pecan Gap chalk 1740-1800 ft, dr 2810 ft. C. A. Kelsey et al's A. R. Brooks 1, (D. Dowdle sur) dr 1955 ft. Stough & Potts et al's J. R. Fitzgerald 1, (John Binnion sur) sd 2200 ft.

KAUFMAN COUNTY—F. E. Skinner & Atlantic Oil Prod. Co.'s W. F. Becker 1, (T. H. Eaton sur) Austin chalk 2171-2677 ft, dr 3125 ft. Cranfill-Lyles & Atlantic's Mrs. E. J. Massingill 1, (Phillip Walker sur) dk.

LIMESTONE COUNTY—Bains Creek Oil Co.'s Kennedy 1, dr 3025 ft. Lead et al's Stitt 1, sd 3050 ft. De Armond & Guffey et al's S. Welch 1, dr gumbo 3075 ft. Eisenmeyer et al's Baker 1, dr 810 ft. Hurdleston et al's Gill 1, dr 990 ft. Magnolia Pet. Co's R. Kennedy 1, top Austin chalk 2360 ft, fsh bit 2480 ft. Stroud et al's Stroud 1, top chalk 2184 ft, dr 2410 ft.

MILAM COUNTY—Magnolia Pet. Co.'s M. M. Kime 1, (S. P. Carson sur) dr 1965 ft.

NAVARRO COUNTY—Bob Penn et al's G. L. Vinson 1 (Bazette Dist.) rig. Rowan et al's W. M. Warren 1, (Bazette Dist.) rig. Matlock-Demott et al's S. M. Huggins 1, (Bazette Dist.) lcn abn. Elliott & Nicolle's D. J. Westbrook 1, (Kerens Dist.) dr 3475 ft. Gulf Prod. Co.'s A. Hilburn 1, (Currie-Richland) top chalk 2530 ft, dr 2650 ft. Barkley-Meadows et al's A. Hilburn 1, (Currie-Richland Dist.) rig. W. A. Graves et al's V. H. Stubbs 1, (Currie-Richland) rig. Sun Oil Co.'s A. Hilburn 1, (Currie-Richland) dr 980 ft. E. L. Smith Oil Co.'s Moore 1, sd for water 650 ft.

RAINS COUNTY—Cree & Coalter et al's W. D. Peeples 1, (F. A. Tibbles sur) sd 2430 ft. Texas Pacific Coal & Oil Co.'s A. A. Humphreys 1, (J. H. Garrett sur) Pecan Gap chalk 2275-2314 ft; Austin chalk 2677-3109 ft, sd probably abn 3309 ft.

ROBERTSON COUNTY—Reiter Foster Oil Corp. et al's W. M. Hill 1, (John Welch League) lcn. Simms Oil Co. et al's A. J. McKinney 1, (J. K. Tyler League) lcn; B. F. Stidham 1, (Jas. P. Jones League) lcn.

TITUS COUNTY — Magnolia Pet. Co.'s George Antone 1, (Near Talcy) dr 3140 ft.

VAN ZANDT COUNTY—J. E. Walsh-Al Merrick et al's W. E. Simpson 1, (John Welch sur) lcn.

Texas Panhandle Wildcats

COMPLETIONS

Company, Well and Location	Initial Production Bbls.	Depth
Carson County—		
Gulf Prod. Co. Burnett 7.....	330	2989
Hutchinson County—		
R. G. Barnum et al Johnson Bros. 1	50	3100
Potter County—		
Amarillo Oil Co. J. C. Warrick 1-A	150	3100

DRILLING REPORT

CARSON COUNTY—American Ref. Co.'s Burnett 1-C, set 10 inch casing and standardized 1819 ft; Burnett 1-D, dk. Crosbie Oil Co.'s Burnett 2, cemented 6⅝ cas and std. 2821 ft; Burnett 3, rotary rig. Culbertson et al's V. B. Armstrong 1, sd after shot, td 3560 ft. Gulf Prod. Co.'s Burnett 8, dr 2815 ft; Burnett 9, rig. Hicks & Schoonmaker et al's Burnett 1, rig. Magnolia Pet. Co.'s Burnett 1, dr 1195 ft. Olson Bros. et al's Burnett 1, sd 2970 ft. Premier Oil Corp.'s Burnett 1, sd in heavy gas 2860 ft. W. W. Silk et al's Burnett 4, dr 940 ft; Burnett 5, lcn. The Texas Co.'s Burnett 6, rig; M. C. Burnett 3, dr 1900 ft.

COTTLE COUNTY—T. J. Woodley et al's A. C. Dulaney 1, sd 2935 ft.

DICKENS COUNTY—Mickels et al's Pitchfork Ranch 1, sd 350 ft.

GAINES COUNTY—Phelps & Mundy's M. C. Lindsey 1, rig.

GRAY COUNTY—A. R. Anderson-Bock et al's Beavers-Bradford 1, dr in gas 2830 ft. C. H. Clark et al's Coombs-Worley 1, showing oil 2841-61 ft, fsh 2880 ft. Danciger Oil & Ref. Co.'s J. B. Bowers 1-A, dr 2590 ft. W. H. Holmes' J. B. Morse 2, sd 3147 ft. Wilcox Oil & Gas Co.'s Coombs-Worley 2, set 8¼ cas and std 2342 ft.

HUTCHINSON COUNTY — Amarillo Oil Co.'s L. Bivins 2-B, ur 6⅝ cas in heavy gas 2930 ft. W. T. Coble et al's J. A. Whittenburg 1, rotary rig. Dixon Creek Oil Co.'s Smith et al 2, dr 1200 ft. Gulf Prod. Co.'s Dial-Perkins 2, dr 1525 ft. J. H. Middleton et al's J. Weatherly 1, dr 840 ft. New Domain Oil & Gas Co.'s Barton 1, rig burned, td 2690 ft. Panhandle Ref. Co. et al's Dial-Perkins 2, dr 2360 ft; Dial-Perkins 2, lcn; J. A. Whittenburg 1, lcn. J. R. Phillips et al's W. L. Kingsland 1, lcn in center NW SE sec 6, M. & C. survey, blk "Y". Prairie Oil & Gas Co.'s D. Shaw 1, dr 3465 ft. Western Enterprise Oil & Gas Co.'s Smith et al 2, rig.

MOORE COUNTY — Amarillo Oil Co.'s Masterson 1-A, sd for water in gas pay 2375 ft.

POTTER COUNTY—Amarillo Oil Co.'s W. H. Bush 1, dr by cas 3495 ft.

ROBERTS COUNTY—Phil Engle et al's Mrs. Lederick 1, dr 2365 ft.

WHEELER COUNTY—Angus et al's Ember 1, spudding. Globe Oil Co.'s Williams-Laycock 1, rig. W. D. Sheddon et al's B. F. Westmoreland 1, sd 110 ft. Nobles Oil Co.'s Williams-Laycock 1, rig. J. J. Rook et al's H. C. Phillips 1, lcn. Texhoma Oil & Ref. Co.'s J. H. Jackson 1, dr 1495 ft; Jackson 1-A, rig. Vanghan-Pendleton et al's P. W. Krey 1, ur 10-inch cas 1345 ft. Jim Whittington's Williams-Laycock 3, light spray oil, dr 2230 ft; Williams-Laycock 4, rebldg burned dk, td 2053 ft; G. W. Porter 1, dr 750 ft. Jim Whittington et al (was Union Pet. & Supply Co.) O. T. Nicholson 1, co 1350 ft.

North Texas Wildcats

COMPLETIONS

Baylor County—		
Grebin & Sullivan et al Anderson 1.	*	1710
J. R. McCauldin et al Martin 1	*	1753
A. T. Strong et al Young 1	*	1607
Clay County—		
G. T. Morris et al Stephenson 1	*	1525
P. F. Gwynn et al Saner-Lomax 1.	*	1154
Mitchem-Logan et al J. Y. Sneed 1.	*	2020
Throckmorton County—		
Mitchem-Logan et al Horton 1.....	*	1609

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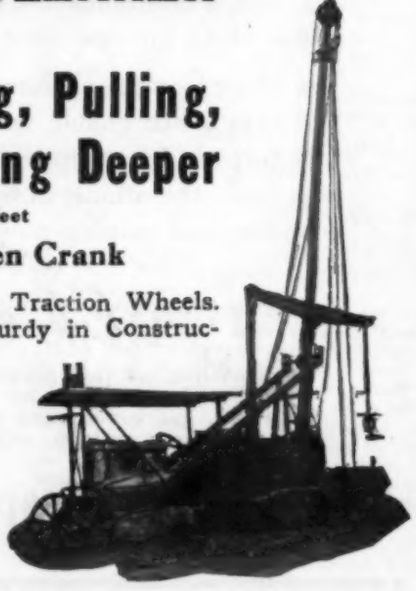

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Throckmorton County—			
Mitchim-Logan et al Horton 1.....		*	1609
McCausland & Monohan et al Rogers 1		*	1005
Wilbarger County—			
Consolidated Oil Co. Waggoner 1..	65		1968
Humble Oil & Ref. Co. Waggoner 1-C		*	2290
Gulf Prod. Co. Waggoner 1-S, (sec 5, S. P. sur)		*	3003
The Texas Co. J. L. Owens 1 . .		†	1232
Upham et al Waggoner 1		*	500

DRILLING REPORT

BAYLOR COUNTY — Brit Cranfill et al's Mills 3, lcn. Dallas Oil Co.'s Shawver 1, sd 1885 ft. W. H. Dyer et al's Cox 1, dr 1295 ft. E. M. Jones et al's Bassett 1, dr 1680 ft. Lehman et al's Shawver 1, sd 1160 ft. L. E. Sheldon et al's Mills 1, spudding. Southern Exploration Co.'s Michna 1, rig.

CLAY COUNTY—J. L. Ashcraft et al's R. L. Robinson 1, dk. Mills Bennett et al's E. L. Holloway 1, tested water 1728 ft. Lone Star Gas Co.'s Magnolia Fee 2, cemented cas 1634 ft; Martin 23, dr 1435 ft: I. D. Stine 17, dr 1605 ft. John O'Neil et al's J. F. Alcorn 1, dr 1520 ft.

COOKE COUNTY—Godley Oil & Gas Co.'s M. E. Florence 1, dr 1030 ft. C. C. Lanier et al's A. Hyman 1, lcn. Big Indian Oil & Dev. Co.'s F. Lester 1, lcn. Leonard & Jones' Hamilton 1, sd 1885 ft. Chas. Pettit et al's Ed. Nelson 1, fsh 2620 ft; M. F. Williams 1, dk. W. J. Rawson-Lyles et al's Aldridge 1, fsh 2725 ft. Red River Drilling Co.'s Jones 1-A, dr 2030 ft.

DENTON COUNTY—McNeill & Kitchen's T. Wright 1, lcn. Galloway & Co.'s Dollenger 1, sd 885 ft. Gainesville Oil Synd.'s Kate Fontenberry 1, fsh 1380 ft.

FOARD COUNTY—The Texas Co.'s McCoy 1, materials.

GRAYSON COUNTY—The Texas Co.'s G. W. Cannon 1, dr 2460 ft. Clopton & McMahon's Ida Thorn 1, dr 1850 ft. H. H. Johnson et al's Marshall 1, sd 1100 ft. Whitesboro Oil & Dev. Co.'s Jewell-Anderson 1, dr 1450 ft.

HASKELL COUNTY—Andrade et al's Macon 1, lcn. F. Mullendick et al's Cobb 1, rig. Myers et al's J. K. Stoker 1, lcn.

MONTAGUE COUNTY — Daniels-Rutis & Panhandle Ref. Co.'s Salmon 2, dr 340 ft. Gulf Prod. Co.'s L. E. Benton 2, ur cas to shut off water 3314 ft. Humphreys Corp.'s A. B. Hinton 1, dr 820 ft; W. W. Jones 2, dr 770 ft; J. W. Maddox 2, dd, dr 1570 ft; Maddox 4, lcn. Nocona Gas Co.'s R. Hinds 2, sd 340 ft. Owenwood Oil Corp.'s Salmon 1, dr 1470 ft. The Texas Co.'s N. J. Howard 1, ur 10-in cas 520 ft. Pure Oil Co.'s W. W. Jones 1, dk. Universal Oil Co.'s S. P. Steadman 1, dk. Newblock Oil Co.'s J. W. Maddox 1, dk. Texhoma Oil & Ref. Co.'s N. J. Howard 4, rigging up to pump with 1400 feet 28½ gravity oil in hole 1599-1631 ft.

WILBARGER COUNTY—D. H. Allday et al's W. S. Lundy 1, dk. C. Andrade et al's Archer 1, sd 425 ft. Atlantic Oil Prod. Co.'s Waggoner 2-B, dr 640 ft. F. A. Beatty et al's Waggoner 1-A, sd 402 ft; Waggoner 1, sec 47, dr 1710 ft; Waggoner 1, sec 15, dr 940 ft. Bridwell-Heydrick et al's Waggoner 1, sd 2344 ft; McCrary 1, dr 1420 ft. B-H & Texas Pacific Coal & Oil Co.'s Waggoner 1, sd 2240 ft. Burton-Ruff & Empire Gas & Fuel Co.'s Waggoner 1, dr 2000 ft. Bob Brewer et al's Schmoker 1, dr 1525 ft. Consolidated Oil Co.'s (was Knight & Hines) Waggoner 1, testing oil pay 1938-68 ft; Waggoner 2, sec 4, rig; Waggoner 1, sec 27, dr 1015 ft; Waggoner 1, sec 2, blk 4, dr 800 ft; Waggoner 1, sec 7, blk 4, dr 1690 ft; Waggoner 1, sec 4, blk 5, spd and sd; Kelly 1, dr 1410 ft. E. A. Durham et al's Waggoner 1, sd 700 ft; Waggoner 2, dr 950 ft; Waggoner 3, dr 1020 ft. J. W. Dyson et al's Waggoner 1, fsh tools 1205 ft. Electra-Texas Oil Co.'s Waggoner 2, dr 500 ft. H. F. Gibson et al's Waggoner 1, lcn. Wood W. Graham et al's M. J. George 1, sd 1530 ft. Gulf Prod. Co.'s Zipperle 1-A, dr 1455 ft. Hoffer Oil Corp. et al's Waggoner 1, sec 43, blk 2, rig. Dan Holmes et al's Richardson 1, spudding. Herbert Oil Co.'s Waggoner 1, dr 645 ft. T. A. Key et al's Waggoner 1, sd 2235 ft. J. B. Levy et al's Waggoner 2, blk 14, sd 2450 ft; Waggoner 1, blk 4, dr 1220 ft; D. Wheeler 1, co 2056 ft. Lippard Oil Co.'s Fluhman 1, sd

1855 ft. M. Lippard et al's Waggoner 1, dr 1725 ft; Waggoner 2, dr 1250 ft; Waggoner 3, dd, co 2031 ft. E. A. McKanna et al's Waggoner 1, sec 48, dr 835 ft; Waggoner 1, sec 31, dr 810 ft. Maer-Staniforth et al's Waggoner 1, sec 4, dr 925 ft; Waggoner 1, sec 10, lcn; Showers 1, dr 1260 ft. Maxwell & Weekly's Morris 1, sd fuel 1650 ft. Murchison-Fain et al's Waggoner 1, dr 2380 ft; McCamey-Sherrin et al's Waggoner 1, sd 1250 ft. Magnolia Pet. Co.'s Moore-Waggoner 1, sd 1770 ft. McLester Oil Co.'s Waggoner 1, dr 990 ft. Mon-Tex Oil Co.'s Waggoner 1, spd and sd. Panhandle Ref. Co.'s Key 1, dr 1335 ft. Quaker Oil Co.'s Waggoner 1, rig. C. M. Root et al's McCrary 1, testing oil sand 1871-93 ft. J. F. Shipley et al's B. W. Murphy 1, dr 1305 ft. M. L. V. Smith et al's Waggoner 1, sec 24, spd and sd; Waggoner 1, sec 35, dr 1140 ft. W. A. Smith-Kleeden et al's Castlebury 1, sd 1100 ft. Shaw-Edgar et al's Waggoner 1, rig. Simms Oil Co.'s Collins 1, fsh cas 1160 ft. Shamrock Oil Co.'s Waggoner-Brownlee 1, dr 1310 ft. South Vernon Oil Co.'s Zipperle 1, dr 1205 ft. States Oil Corp.'s Waggoner 1, lcn. Texhoma Oil & Ref. Co. & Burton's Waggoner 1, dr 400 ft. Texhoma & Holmes' Mrs. A. Thomas 1, fsh bailer 1620 ft; Flanniken 1, dr 1595 ft. The Texas Co.'s Castlebury 1-B, dr 2560 ft. Tidal Oil Co.'s Waggoner 1, lcn. W. D. Wells et al's Waggoner 1, dr 1365 ft. G. Clint Wood et al's McGill 1, dr 880 ft; Swim 1, dk. Whibert Oil Co.'s Waggoner 1-B, dr 405 ft; Waggoner 1-C, spudding; Waggoner 1-D, spudding.

THROCKMORTON COUNTY — Domestic Oil Co.'s Gober 1, dr 690 ft. Downing et al's Ewalt 1,1dr 1140 ft. Flowers Bros. et al's Travis County 1, dr 1100 ft. P. F. Gwynn et al's Portwood 1, dr 1280 ft. Hill-Roberts et al's Polk County 1, dr 570 ft. Hoffer Oil Corp. et al's Richards 1, sd making 1 million ft gas and spray oil and water 854-55 ft. Humble Oil & Ref. Co.'s King 1, dr 1540 ft. Johnson & NW Oil Co.'s Batchelor 1. sd 910 ft. Larkin-Panhandle Ref. Co.'s Richards 1, sd estimated 40 bbls oil 1831-34 ft. Marland Oil Co. et al's Odell 1, sd 3197 ft. Red Bank Oil Co.'s Graham 1, sd 1015 ft. Richardson Bros. et al's Thomas 1, sd 820 ft. Stiles & Schimmel's Stacey 1, spd and sd. Schimmel Oil Co.'s Kelly 1, sd 1420 ft. Sheldon et al's Whitiker 1, dr 1115 ft. E. L. Smith Oil Co.'s Burkhalter 1, sd 730 ft. Texhoma Oil & Ref. Co.'s Graham 1, sd 350 ft. Tucker et al's Reynolds Ranch 1, sd 715 ft.

Central West Texas Wildcats

COMPLETIONS

Company, Well and Location	Initial Production Bbls.	Depth
Brown County—		
Gillman et al Newton 9	*	1297
Lowe-Delaney & Carter Williams 1	¶8	1287
Prairie Oil & Gas Co. Gaines 4....	175	1284
Rhoades & Hightower Prather 5 ..	20	1320
Palo Pinto County—		
Little Caddo Oil Synd. Massie 2....	*	1893
Scott & McCluer Wheeler 3	*	3730
Reagan County—		
Big Lake Oil Co. University 23, (C NE SE sec 1, blk 2) 4300		2945
Texon Oil & Land Co. University 6-A, (C NW NW sec 36, blk 9)	3035	2952
University 8-A, (C NW SW sec 36, blk 9)	2735	2959

DRILLING REPORT

BROWN COUNTY — Canyon Oil & Gas Co.'s Ellsberry 3, set 8¼ cas 980 ft. Gillman & McMurray's W. H. G. Chambers 1, rig; Teston 2-A, testing oil pay 1245 ft; Teston 3, flowing salt water 1145 ft; Moore 3, dr 1050 ft. Gillette et al's Prather 3, sd 1296 ft. Honea et al's E. DeBusk 2, fsh 2345 ft. Mendenhall et al's Newton 4, rig; Newton 5, rig. Moore et al's Gafford 1, dr 1290 ft; Chambers 1, dr 1165 ft. Moore & Wilson's Gafford 2, spudding; Gafford 3, lcn; Westerman 3, dr 480 ft. Maloy & Chandler's Prather 1, spudding. McMurray et al's Newton 5, testing oil pay 1272 ft. Prairie Oil & Gas Co.'s Gaines 5, rig; Newton 6 and 10, lcns. Ward Oil Co.'s Windham 1, dr 1495 ft.

CALLAHAN COUNTY — Byron-Union Oil

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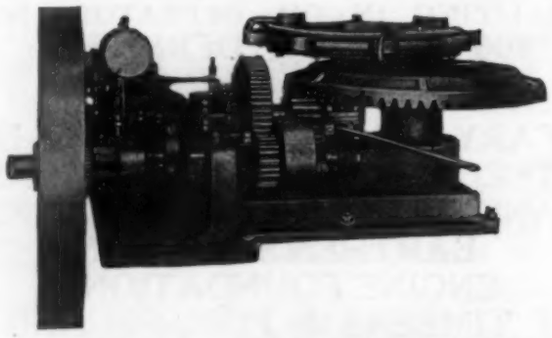

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Co.'s Hennessey 1, dd, sd 4610 ft. Nichols et al's Davis 1, spudding. Seaboard Oil & Gas Co.'s Isenhower 3-A, sd 1700 ft. Urban et al's Finley 1, rig.

COLEMAN COUNTY—Canyon Oil & Gas Co.'s Morris 1, dr 1060 ft; Harris 1, lcn. D. R. Bailey et al's Kelly Grady 1, sd 910 ft.

PALO PINTO COUNTY — Burton-McKee Oil Corp.'s Strawn Coal Co. Fee 4, sr cas 3100 ft. J. D. Cranford & Singleton's L. Smith 1, dr 2715 ft. Webb Dalton et al's Perkins 1, dr 1665 ft. E. T. Hart et al's E. A. Cardwell 1, sd 2000 ft; Cardwell 2, spudding. Hart Oil Corp.'s Orme 1, sd 1320 ft. Moore & Sneboldt's Stuart 3, lcn. Owens & Burkett's Chestnut 1, sd making 1¼ million ft gas 3787-90 ft. Pender Prod. Co.'s Rasmussen 1, dr 2010 ft.

PARKER COUNTY — G. E. LaBeaume et al's Evans 1, dr 2665 ft. English et al's Peters 1, ur 10 cas 920 ft.

COKE COUNTY—West Virginia Oil Marketing Assn.'s J. R. Mims 1, dr 2870 ft.

CONCHO COUNTY — Dome Production Co.'s Mrs. Hartgrove 2, dr 1290 ft.

CRANE COUNTY — Penn-Tex Dev. Co.'s Jax Cowden 1, spd and sd.

CROCKETT COUNTY—J. S. Cosden et al's University 1, sec 34, blk 12, dr 3120 ft. World Co.'s L. P. Powell 1, sd 2480 ft. Crockett Drilling Synd.'s J. M. Shannon 2, material; Robt. Massey 1, sd indefinitely 1670 ft. Red Ball Oil Co.'s University 1, sec 5, blk 29, rig. Shaffer et al's University 1, sec 13, blk 47, lcn.

CULBERSON COUNTY — The California Co.'s Gresham Bros. 1, materials. Gresham Bros. et al's Gresham 1, lcn.

GARZA COUNTY—Gulf Prod. Co.'s Slaughter 1, materials. Armeda Oil Co.'s J. M. Boren 1, pumping oil 2443; Connell 1, sd 600 ft. McDaniel et al's Connell 1, sd 2615 ft. S. A. Sloan et al's Connell 1, rig.

GLASSCOCK COUNTY—Gulf Prod. Co.'s L. S. McDowell 1-C, ur cas 3815 ft.

HOWARD COUNTY—Fred Heyer et al's H. R. Clay 1, lcn.

IRION COUNTY—Chas. Denny et al's D. E. Hughes 1, dr 1245 ft. W. A. Stout et al's J. D. Sugg 1, sd indefinitely 1830 ft.

KENT COUNTY—C. F. Greenwood & Marland Oil Co.'s J. E. Kuteman 1, sec 11, blk 4, dr 1995 ft.

MARTIN COUNTY—Humble Oil & Refining Co.'s C. C. Slaughter 1, materials.

MITCHELL COUNTY — The California Co.'s Paul Elder 1-A, co after shot 3075 ft; Elder 2, dr 2100 ft; Elder 3, dr 2110 ft; Morrison 13, dr 1500 ft. Eddleman et al's A. C. Gist 1, sd 3410 ft. Morrison-Thompson et al's C. M. Adams 1, dr 2900 ft. S. A. Sloan et al's Scott 1, dr 1480 ft; Sam Smart 6, dr 1710 ft; Smart 7, dr 2100 ft. West Texas Ref. Co.'s H. C. Miller 4, dr 2700 ft. Magnolia Pet. Co.'s W. H. Badgett 1, materials; Mary Foster 1, materials.

PECOS COUNTY—Gulf Prod. Co.'s White-Baker 1, sec 85, blk 194, dr 2800 ft. Plymouth Oil Co.'s Perry 1, dr 2820 ft.

REAGAN COUNTY — Big Lake Oil Co.'s University 17, dd, C NE sec 1, blk 2, set 8¼ cas 2435 ft; University 19, C SE SE sec 12, blk 2, dr 2770 ft; University 20, C SW SW sec 25, blk 9, co 2500 ft; University 24, C SE SE sec 1, blk 2, cemented cas 2900 ft; University 25, C SE SW sec 25, blk 9, dr 2582 ft; University 26, C SW SE sec 25, blk 9, dr 780 ft; University 27, NW cor NE NE sec 1, blk 2, dr 1435 ft; University 28, SW cor SE SE sec 25, blk 9, crooked hole 300 ft; University 29, SE cor sec 25, blk 9, dr 530 ft; University 36, 37, 38, 39, 41 and 42, rigging up. The California Co.'s University 1, sec 13, blk 8, testing cas 3778 ft. B. H. Cogdell et al's University 1, sec 23, blk 8, dr 500 ft. W. H. Dunning et al's J. D. Sugg 1, C sec 85, T. & P. sur blk 2, rig. Gulf Prod. Co.'s University 1, NW cor sec 1, blk 1, dr red sand 2765 ft. Pete Hoffman et al's University 2, NE NW sec 15, blk 11, lcn. H. B. McGuire et al's C. W. Merchant 1, sec 12, L. S. & V. Ry sur, blk "A", sd 2730 ft. J. T. Stover et al's University 1, sec 34, blk 11, sd 200 ft. Texon Oil & Land Co.'s University 10-A, C NE NW sec 36, blk 9, dr 2430 ft; University 11-A, C NW NE sec 36, blk 9, dr 2465 ft; University 12-A, C SE NW sec 36, blk 9, fsh tools 2490 ft; University 13-A, C NE SW sec 36, blk 9, dr 560

ft; University 14-A to 18-A, inclusive, rigging up. University Oil Co.'s University 1, sec 17, blk 10, sd 2795 ft.

SCURRY COUNTY—Morrison & Fairchild's Mary E. Towle 1, sec 157, blk 97, rig. Northwest Co.'s J. J. Moore 3, lcn.

STONEWALL COUNTY—Elder Nance et al's Ward 1, changing from star to rotary, td 2120 ft.

STERLING COUNTY — Chicago-Texas Oil & Gas Co.'s D. C. Durham 1, dr 2120 ft; Durham 2, small pumper 1406 ft. Pettit & Adkisson's C. C. Reynolds 1, dr 660 ft. Co-Operative Lease & Dev. Co.'s Douthitt 1, sd 2250 ft. Bushnell & Krous et al's J. J. Dennis 1, lcn. Geo. Northrup et al's I. L. Ellwood 1, rig. Kanawah-Angelo Oil Co.'s L. T. Clark 1, trace oil and water 1110-30 ft, dr 1610 ft. Ford & Cogdell's W. L. Foster 1, sd 1820 ft. Chas Harty et al's Reynolds 1, lcn. Wrigtsman et al's W. L. Foster 1, lcn.

UPTON COUNTY — Big Mesa Oil Co.'s University 1, sec 17, blk 3, dr 660 ft. Bell & Regan's University 1, sec 2, blk 4, dr 1265 ft. W. P. Morris et al's H. M. Halff 1, sd 445 ft. Suggs & Chancellor's University 1, sec 6, blk 4, spd and sd.

Louisiana Wildcats

COMPLETIONS

Company, Well and Location	Initial Production Bbls.	Depth
Natchitoches Parish—		
R. O. Roy & Co.'s Durr 1, 27-10-10	*	2523
Sabine Parish—		
Fla-La Oil Co.'s Walker 1, 8-5-12..	*	2535

DRILLING REPORT

BOSSIER PARISH—Best Oil Co.'s Atkinson 2, 3-18-12, sw 1155 ft, abn; Finouef 1, 8-18-12, dk abn. Coker et al's Rhodes 1, 31-21-11, set 12½-inch 130 ft. Corbett et al's Murff 1, 18-17-11, dk. Osborne et al's McDade 2, 32-19-11, dr 780 ft. Wilder & Cushman's Lewiston 1, 13-16-12, dk.

CADDO PARISH — Ark-Caddo Oil Co.'s Nickerson 1, 30-19-15, sd 2600 ft. Geo. Baird et al's Williams 1, 3-15-15, dk. Dixie Oil Co.'s Dillion 53, 13-21-15, set 6-inch 3575 ft; Jolly 1, 27-22-15, dr 2500 ft. Flournoy et al's Simpson 1, 8-16-15, set 6-inch 1922 ft. Fortuna Oil Co.'s Mitchell 1, 17-18-16, dr 2380 ft; Robertshaw 10, 23-21-15, 30 million cu ft gas 3604 ft, tools stuck in hole. Gulf Ref. Co.'s Ferry Lake 69, 14-20-15, dr 2795 ft. Haynes Bros.' Louisiana L. S. & P. Co. 1, 8-19-16, dr 2530 ft. Stith et al's Pitts 1, 11-23-16, sd 600 ft. The Texas Co.'s Hutchinson 1, 15-15-12, dr 2550 ft; Jeems Bayou-Federal 1, 15-20-16, set 6-inch 3501 ft. Woodley & Collins' McVea 1, 23-19-14, dr 2485 ft. D. C. Richardson's McGuffin 1, 4-18-15, testing 980 ft.

CALDWELL PARISH—W. E. Neill's Cain Hill 1, 21-14-4e, waiting on casing, 3465 ft.

CLAIBORNE PARISH — Black O. & G. Co.'s Aubrey 2, 20-21-8, sd 770 ft. Claiborne-Lincoln Synd.'s Fields 3, 22-19-5, to deepen, 2260 ft. Clark & Melat's Heard 1, 5-21-6, sd 2200 ft. Triangle Drlg. Co.'s (Snyder) Cox 1, 7-19-5, set 6-inch 2404 ft.

DE SOTO PARISH — Daniels & Roscoe's Pollack 1, 36-11-14, sd 3230 ft. Fortuna Oil Co.'s Alexander 1, 32-12-15, dr 1625 ft. Ulrey et al's Deas 1, 23-11-12, lcn; Bishop-Robinson 1, 22-11-12, sd 2992 ft.

GRANT PARISH—Finn Construction Co.'s Ball 3, 14-7-1w, to test 1100 ft. Grant Parish Pet. Co.'s Ball 2, 1-7-1w, sd 150 ft; Selma Lumber 1, 14-7-1w, sd 950 ft.

JACKSON PARISH—Big Chief Oil Co.'s Rymes 1, 13-14-4w, dr 1910 ft.

LA SALLE PARISH — Alexandria-Urania Oil Co.'s State 1, 26-10-1e, dk timbers. Columbia Oil & Gas Co.'s Urania 1, 22-10-2e, sd 200 ft; Urania Lumber 2, 16-10-2e, dk. Gould & Monroe Drlg. Co.'s Harper 1, 23-10-1e, dr 1200 ft. Gulf Ref. Co.'s Urania 1, 22-10-2e, dk; Urania A-1, 22-10-2e, dr 2730 ft. Heard et al's Boyd 1, 28-11-2e, dk. Ford et al's Tullos 1, 23-10-1e, dk. Helm & Burch's Urania Lumber Co. 1, 28-11-2e, set 10-inch 99 ft. Imperial O. & G. Co.'s Urania 1, 10-10-2e, rig. Jones & Haywood's Kees 1, 7-10-3e, dk. Bill Rowe's Urania Lumber Co. 1, 7-10-2e, testing 1540 ft.

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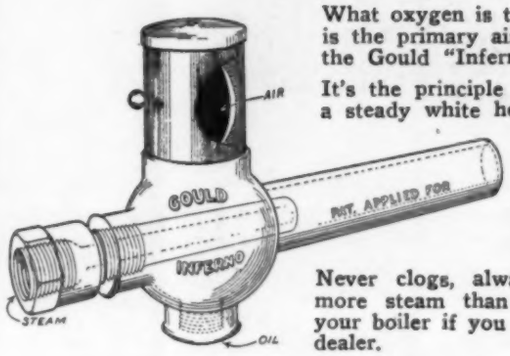

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I WILL SELL, pursuant to order of the United States District Court, the oil and gas leases and personal property now jointly owned by the Roxana Petroleum Corporation and the North American Oil & Refining Corporation in the South Bend Oil Field, Young County, Texas. These leases comprise nearly 3600 acres, with 23 producing oil wells, having present settled production of about 230 barrels per day. Equipment includes all machinery, powers, portable tools, well equipment, water pumping plant, water and oil pipe lines, tanks, buildings, fencings, etc. Also telephone line running from Graham, Texas, to South Bend, Texas. Sale may be made for all cash or upon terms.

BIDS WILL BE RECEIVED up to and including May 25th, 1925, for (1) the properties as a whole; (2) each lease separately, with the equipment pertaining thereto; (3) the telephone line; (4) the personal property, buildings, etc., not required for operation of the wells. Right is reserved to reject any and all bids.

COMPLETE INFORMATION as to the leases, wells and personal property will be furnished on request.

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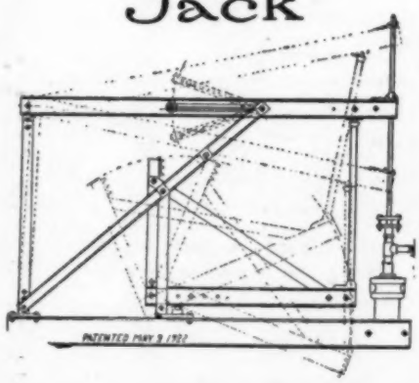

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The O. W. Combination Rod Socket

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Has only one set of slips. And they are long enough to allow the broken rod to enter far enough to insure gripping.

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A Steel plug that carries the three slips by means of three steel pins pressed into the plug

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Patent applied for

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Urania Petroleum Co.'s Urania Lumber Co. 6, 18-10-2e, to clean out, 1511 ft. Zeigen et al's Hardtner 1, 19-10-2e, set 10-inch 130 ft. Urania Lumber Co. 1, 18-10-2e, swabbing sw and oil, 1512 ft; to pack off bottom of hole.

LINCOLN PARISH—Buckner et al's Barrett 1, 13-20-3w, sd 1220 ft. Gulf Refining Co.'s Dudley 1, 4-18-4w, dr 2335 ft. Ruston Drlg. Co.'s Richardson 1, 7-18-2w, dr 200 ft.

OUACHITA PARISH — Dickson & Frue's Goodwin 1, 24-18-2e, sd 2860 ft. White et al's Jones 1, 6-16-5e, sd 2350 ft.

SABINE PARISH—Emlet et al's Bowman-Hicks Lumber 4, 8-7-12, dr 1725 ft; Bowman-Hicks Lumber 5, 9-8-12, testing 2633 ft.

UNION PARISH—Jones & Walker Oil Co.'s Feazel 1, 6-19-2e, fsh 2558 ft. Roxana Pet. Co.'s Henderson-Bennett 1, 13-22-3w, dr 1915 ft.

WEBSTER PARISH — Fortuna Oil Co.'s Bible 1, 8-20-9, dr water well, sd 1938 ft; Branton 1, 16-22-9, set 6⅝-inch casing 2595 ft. Kinnedy et al's Ambrose 1, 19-20-10, rig sd. McDowell et al's Hortman 1, 15-20-10, sd 2525 ft.

WINN PARISH—Hall et al's Nagle 1, 6-10-2w, sd 270 ft.

Arkansas Wildcats

COMPLETIONS

Company, Well and Location	Initial Production Bbls.	Depth
Drew County—		
Rhodes et al's Harris 2, 5-13-8.....	*	3021
Little River County—		
Graves et al's Thomas 1, 15-13-29..	*	3908
Miller County—		
Coplen et al's Wiseman 1, 36-15-27.	*	400
Union County—		
Mathews et al's Teele 1, 11-19-12....	*	2664

DRILLING REPORT

BRADLEY COUNTY—Rhodes et al's McQuistian 1, 36-12-8, sd 225 ft.

CALHOUN COUNTY — Murdock et al's Eagle Mills 1, 29-12-15, dr 1370 ft.

CLARK COUNTY—Southern Drilling Co.'s Burrows 1, 35-10-20, sd 714 ft.

COLUMBIA COUNTY—Arkansas Fuel Oil Co.'s Longino-Goode 1, 14-18-20, rig. Hargis et al's Souter 1, 24-17-22, sd 35 ft. Heath Trust's Williams 1, 1-19-21, dr 2850 ft. Johnson et al's Sailles 1, 18-17-22, sd 915 ft. Kemp et al's Emerson 1, 7-19-19, sd 2260 ft. Ky-Ark Pet. Co.'s Doss 1, 29-19-20, sd 650 ft. Meier et al's Gantt 1, 15-17-22, dk. Phillips et al's Davis 1, 14-18-21, sd 2755 ft. Transcontinental Oil Co.'s McClurkin 1, 6-16-19, wosr 2182 ft. Wingfield & Mitchell's Bodcau Lumber Co. 1, 4-20-21, sd 2020 ft.

DALLAS COUNTY—Durr et al's Riggs-Matlock 1, 33-8-15, sd 2400 ft.

DREW COUNTY—Graves et al's Karnes 1, 10-13-6, sd 2472 ft. McClintock et al's Ogle 1, 35-13-5, rig. Spooner et al's Meyer 1, 4-16-17, sd 50 ft.

GRANT COUNTY—Haley & Evans' Pike 1, 8-6-11, sd 50 ft.

HEMPSTEAD COUNTY—Grassy Lake Oil Assn.'s Gun Club 1, 27-12-27, sd 2100 ft. Hempstead Oil Co.'s Nicholls 1, 17-11-25, sd 1980 ft. Wooten et al's Walker 1, 22-11-24, dr 1850 ft.

LA FAYETTE COUNTY — Estes et al's Bodcau 1, 13-18-24, sd 20 ft. Ken-Saw Pet. Co.'s Red River Valley 2, 3-20-24, fsh 2040 ft. Wetherbee et al's Jeffus 1, 8-19-23, dr 770 ft.

LITTLE RIVER COUNTY—Grote et al's Allen 1, 2-13-29, td 3400 ft; to plug back and set 6-inch at 2900 ft. Johnson et al's Hawkins 1, 10-11-31, sd 1350 ft.

MILLER COUNTY—Adams et al's Bale 1, 15-16-26, set 10-inch 30 ft. Gillespie et al's Fee 1, 2-15-26, sd 150 ft.

NEVADA COUNTY—Falcon Drilling Co.'s Weaver 1. 6-13-21, lcn. McInturff et al's Eades 1, 11-12-23, sd 1150 ft. Zingg et al's Groves 1, 22-10-23, dr 1290 ft.

OUACHITA COUNTY—Buffalo Oil Co.'s Wesson 1, 26-15-19, testing 2209 ft. Jones et al's Wilson 1, 26-15-18, coring 1740 ft. Langston et al's Allen 1, 25-14-19, sd 2380 ft. Lion O. & R. Co.'s Burton 2, 30-15-17, to dr 6-inch plug 2300 ft. C. W. Robinson's Polk 1, 16-15-19, dr 850 ft. Willis Wright Synd.'s Eagle Lumber 1, 17-12-15, dr 2005 ft.

PIKE COUNTY—Strawn et al's Banks 1, 11-8-25, sd 221 ft.

UNION COUNTY—Berry et al's Union S. M. 1, 14-19-11, sd 1770 ft. Liberty Oil Co.'s Davis 1, 31-16-14, sd 2502 ft. Magnolia Pet. Co.'s Chandler 1, 4-19-14, sd 2356 ft. Ward et al's Goodwin 1, 16-16-14, fsh 2561 ft.

Oklahoma Wildcats

ALFALFA COUNTY—McGinnis & Ward.'s Watts 1, C SE NE SW 21-27-10w, sd 3504 ft.

ATOKA COUNTY — McPhearson et al's Wild 1, SWc NW 7-2-9, sd 4323 ft. Henson et al's Dabney 1, C SE NW 17-4-11, sd 3005 ft. J. P. Torrance et al's Fee 1, SWc NE 1-2-9, sd 2685 ft. Wapanucka Dev. Co.'s Underwood 1, S W L SE SE 28-2-9, sd 1343 ft.

BLAINE COUNTY—Mayers et al's Chronister 1, SEc NW NW 7-18-15w, sd 965 ft. Okomo Oil Co.'s Ekleman 1, SEc 21-15-10w, sd 2610 ft.

BRYAN COUNTY—Alexander's Hampton 1, SEc NE 26-7-11, sd 1400 ft.

CANADIAN COUNTY — Thos. Revelle's Dawson 1, C SE SE NW 20-26-9w, repair rig 2955 ft. Carrol et al's Setter 1, SEc 2-13-8w, sd 100 ft. Wilcox et al's Sanders 1, C NE NE NE 29-11-7w, sd 40 ft.

CLEVELAND COUNTY — Garr Oil Co.'s Holland 1, NEc SE 31-10-4, sd 2620 ft.

GRANT COUNTY—Embry et al's Edwards 1, C SE SE NW 20-26-4, sd 1000 ft. Midwest & Gulf's Moon 1, NEc NW 8-27-8w, sd 2490 ft. Frank Travers et al's Fuss 1, SWc NW NW 3-27-4w, sd 1250 ft.

HUGHES COUNTY — Mathers & Skelly's McClain 1, C SW SW 4-5-11, sd 3206 ft. Walton, Snyder & Marshall's King 1, C E L NE NW 8-6-10, dr 3570 ft. Atkins et al's Sewell 1, C SE SW SW 14-7-9, dr 415 ft. Parmenter et al's Stewart 1, C SW SE 11-5-8, rig.

JEFFERSON COUNTY — Barker et al's Major 1, C SE SW 34-5-6w, sud and sd. Godley Oil Co.'s Woodworth 1, C NE NW 36-5-4w, dr 1400 ft. Pauline O. & R. Co.'s Graver 1, C NE SW 17-5-8w, lcn.

KAY COUNTY—Day Oil Co.'s Vanatta 1, SWc NW 8-26-2w, dr 4875 ft. Hickman & Barnhard's Sheets 1, C NW SW SE 25-29-2w, sd 835 ft.

KIOWA COUNTY—Connor et al's No. 2, NEc NW NW 34-7-16w, fsh 1100 ft. Alcorn Co.'s No. 1, NEc SE SE SW 13-7-16w, sd 2000 ft.

LINCOLN COUNTY—P. & R. Corp.'s Hanzig 1, SWc NW NW 14-13-6, sd 2886 ft. Douglas Oil Co.'s Ewing 1, NEc 7-13-3, dr 300 ft. Eugene Coste & Co.'s Ross-Fortune 1, SEc NW 26-12-2, sd 3873 ft. Wilcox O. & G. Co.'s Smith 1, SEc NW NE 12-12-3, dr 3710 ft. F. O. Howarth's Harris 1, SEc NE 22-15-2, dr 4070 ft. Santrock Drilling Co.'s No. 1, SEc NW 17-15-3, sd 920 ft. Ruby et al's Cull 1, NEc NW 36-15-4, sd 3705 ft.

LOGAN COUNTY—Skelly Oil Co.'s Newman 1, NWc NW 32-19-3w, sd 2500 ft. Franklin Oil Assn.'s Moore 1, NWc SE SE 35-7-4w, dr 2310 ft. McMunn & Nixon's Field 1, SWc NE SE 35-7-4w, rig. Haley & Pioneer Pet. Co.'s Quair 1, SWc SE 33-19-3w, spd and sd. Blackford O. & G. Co.'s Lair 1, C S L N½ SE 28-16-1w, fsh 750 ft. Magnolia Pet. Co.'s Prichard 1, NWc 23-15-1e, dr 3715 ft.

LOVE COUNTY — Drillers Syndicate Oil Co.'s Wilson 1, NWc SE 11-7-2, sd 2830 ft. Magnolia Pet. Co.'s Crowe 1, C NE NE SE 13-8-2, dr 1560 ft. Smyer & Stein's Gray, C SE SE 12-9-1, rig.

MAJOR COUNTY—Texas Prod. Oil Co.'s Basin 1, SWc 6-22-14w, sd 1300 ft. Bradstreet Oil Co.'s Radcliffe 1, C SW 9-22-9w, sd 4165 ft. Franz & Slick's Gray 1, C NW 36-21-11w, sd 1000 ft.

PONTOTOC COUNTY—Highland Oil Co.'s Hatcher 1, C NW SW 4-4-5, fsh 2285 ft. Galloway et al's Hays 1, NEc SE NW SW 13-3-6, sd 1100 ft. American O. & R. Co.'s McDaniels 1, SEc NE SW 3-4-6, fsh 3140 ft. Lloyd & Smith's Lloyd 1, C NE SW NE 6-3-7, co 1258 ft, show oil.

POTTAWATOMIE COUNTY — Ossie Oil

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Co.'s Howell 1, SWc NE 17-10-2, sd 3370 ft. The Texas Co.'s Allenbaugh 1, SEc SW 3-11-6, dr 350 ft. Davie Detrick's McGathey 1, SEc 10-6-2, sd 3850 ft. H. G. Gwinnup's Floyd 1, SW SE 12-11-3, sd 3655 ft. Pierce Oil Corp.'s Magett 1, NWc 25-10-4, sd 460 ft. McMann Oil Co.'s Heghan 1, SWc NW 19-7-4, sd 100 ft. Halmond Osmond et al's Fiddler 1, SEc NW 4-5-5, sd 545 ft. Central National Oil Co.'s Toney 1, C SW SW SW 28-10-4, sd 300 ft.

ROGERS MILLS COUNTY — Twin Hills Oil Co.'s McClure 1, NWc 15-16-26w, sd 4310 ft. Trio Oil Co.'s No. 1, SEc NW SW 3-13-26w, sd 3200 ft.

SEMINOLE COUNTY—Maxwell & Carty's Christie 1, C NE NW 33-6-6, sd 3000 ft. Link Oil Co.'s Caroline 1, C SE NW 14-6-7, sd 2840 ft. Wm. McDougal's Belle Dindy 1, C SE SE 30-6-7, sd 3450 ft. R. F. Garland's Farlin 1, C NE NW 6-6-8, fsh 1390 ft. Central National Oil Co.'s Harjo 1, C NE SW NE 14-11-7, sd 2920 ft. Transcontinental Oil Co.'s Davis 1, NE SE 22-7-7, fsh 3325 ft. Bryan Bros.' Walker 1, C SE SE SE 4-7-6, dr 555 ft.

WOODS COUNTY—Victor Oil Co.'s Van Buskirk, SWc SE 10-25-15w, sd 960 ft.

WASHITA COUNTY—Meridian Pet. Co.'s No. 1, SE SE SE 14-9-15w, lcn.

Kansas Wildcats

BARBER COUNTY—R. D. Brown's No. 1, NWc SW NE 33-30-14w, dr 600 ft.

BARTON COUNTY — Cheyenne Oil Co.'s Sooy 1, SWc SW 27-18-12w, sd 3525 ft. Haynes et al's Taul 1, NWc 21-12-12w, sd 2100 ft. John Herron's No. 1, SEc NE 22-18-13w, dr 3940 ft. Huffine et al's Smith 1, C NE SW 21-19-12w, fsh 1385 ft.

CLARK COUNTY—Watchorn Oil & Gas Co.'s Morrison 1, SEc NE NE 2-22-1w, dr 5260 ft.

CLOUD COUNTY—Livingston et al's Murdock 1, SEc 6-6-4w, sd 365 ft.

COFFEY COUNTY—Mendenhall & Wrinkler's Elliott 7, C NE SW 14-23-13, no report. Manhattan Oil Co.'s Elliott 2, C S L SW 14-23-13, no report.

FINNEY COUNTY—Garden City O. & G. Co.'s Wann 1, SEc SE 36-21-20, no report.

GEARY COUNTY—Liberty-Texas Oil Co.'s Wright 1, NEc 9-12-6, sd 750 ft; Foster 1, NEc SW 3-12-6, sd 2000 ft.

GOVE COUNTY—Keyes Bros. & Marine's Bowman 1, NWc SW 23-13-26w, lcn.

GRAHAM COUNTY—Keyes Bros. & Marine's Taxton 1, SEc NW 23-8-24w, co 2000 ft. Gruen & Shriler's Baker 1, NWc SE NW 17-10-24w, rig.

JEFFERSON COUNTY — Northern Counties' Edwards 1, SEc NW NW 13-8-9, sd 3405 ft.

KINGMAN COUNTY—Hale et al's Graber 1, SWc NW 34-27-7w, fsh 3025 ft.

LABETTE COUNTY—Ark Fuel Oil Co.'s Sparks 1, NEc SE SE 14-31-17, sd 1100 ft.

LINCOLN COUNTY — Equity Oil Co.'s Jellison 1, NWc SE 19-13-9w, dr 3025 ft. Scott & Collins' Stone 1, SEc SW NE 19-11-6w, sd 500 ft.

MARION COUNTY — Leonard Pet. Co.'s Whaler 1, SEc NE NW 23-19-4, spd.

NEMAHA COUNTY — Nemaha O. & G. Co.'s Meyers 1, NWc 19-3-11, sd 3250 ft.

OSAGE COUNTY—Rodgers & Bittle's Bertha 1, SEc NW 22-17-16, lcn. Mul-Vit Dev. Co.'s Neil 1, NEc NW SW NE 8-17-17, sd 2735 ft. Baker et al's No. 1, C SE SE 3-10-4, spd and sd.

POTTAWATOMIE COUNTY—Crawford et al's Stewart 1, C W L SE SE SE 17-19-12, rig; Greishabert 1, SWc SE SE SW 9-17-17, rig; St. Mary 1, SWc 11-1-12, sd 2290 ft.

RICE COUNTY—Stamey's Barnes 1, SEc NE 21-20-8w, dr 3370 ft. Jasper & Beschka's Walker 1, SWc NE 10-18-6w, co 2200 ft.

RILEY COUNTY—Pawnee O. & G. Co.'s Marks 1, SEc NE NW 26-10-6, sd 2030 ft.

ROOKS COUNTY—Keyes Pet. Co.'s Sandon 1, NWc SW SE 7-8-20w, spd and sd. J. C. Findeiss et al's Minx 1, SWc 25-10-19w, dr 1415 ft.

SALINE COUNTY—Thrall et al's No. 1, SEc NE NW 15-15-4w, spd and sd.

SEDGWICK COUNTY — J. H. Liggett's

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Funk 1, NEc NW 11-26-1, dr 2535 ft. Harwood-Winters & McKenne's Casas 1, SEc NW NE 7-22-4w, lcn. L. E. Craig et al's Mean 1, NWc NW 26-22-1w, r 2675 ft. Curtis et al's Duncan 1, SEc NW NW 19-29-1w, lcn. Allison & Fitzwilliams Webb 1, C NE 21-29-3w, spd and sd.

SEWARD COUNTY — C. T. Dev. Co.'s Woods 1, NWc NE 34-34-34, sd 700 ft. Seward O. & G. Co.'s Selsey 1, NEc NW 2-33-33, sd 2785 ft.

SUMNER COUNTY—Texas Co.'s Nixon 1, SWc SE SE 12-35-1, rig. Foster et al's French 1, NWc 13-31-2, lcn. Phillips Pet. Co.'s Armspiger 1, NWc 17-34-1, fsh 4075 ft. Wilcox O. & G. Co.'s Stayton 1, NWc SW 5-32-2w, set 10-inch 1876 ft. Champlin Ref. Co.'s Stevenson 1, SEc SW SE 9-31-1w, dr 1400 ft.

TREGO COUNTY—Keyes Pet. Co.'s Davis 1, NEc SW 16-11-24w, fsh 3030 ft; Walsh 1, NWc SE 5-11-25w, sd 1450 ft; Walsh 2, SWc NE SW 5-11-25w, sd 1550 ft.

WABAUNSEE COUNTY—Williams et al's No. 1, NEc SW 9-5-5, sd 3600 ft.

WILSON COUNTY — Rhodes & French's Brown 1, NWc SW NW 2-27-14, dr 980 ft.

WOODSON COUNTY—Mathews et al's Jeffers 1, NWc SE 36-26-15, lcn. Dave Alter et al's Hunt 1, NWc SW 13-25-14, spd. Harris et al's Greese 1, NWc SE 35-25-12, lcn.

San Antonio District Wildcats

ATASCOSA COUNTY — DeLange-Eiser Co.'s Tom 2, set cas at 3900 ft to save gas; waiting on cement to set before testing.

BEXAR COUNTY — Humble Oil & Ref. N. C. Cassin 1, spudding in; Menchaca 1, dk. White & Hamton's Swearington 1, sd.

DUVAL COUNTY — Co-Operative Drilling Co.'s Dinn 1, sd 2070 ft. Associated Oil Co.'s Sutherland 1, lcn. Mesquite Oil Co.'s No. 1, setting liner. Booth Interests' W. R. Peters ranch, lcn. O. W. Killam's Benavides 1, set 5⅛-inch cas at 1704 ft.

GUADALUPE COUNTY — J. K. Hughes Dev. Co.'s Allen 20, no report. Allen Burman's Bailey 1, dr below 460 ft. Magnolia Oil Co.'s Nos. 13 and 14, dr. Jennings et al's Vogel 1, no report. Ross & Green's Pryor 1, sd Stebbins Oil & Gasoline Co.'s Lenz 1, dk. McClannahan's Herman Lenz 1, dr. J. M. Davis et al's Koch 1, no report; Augusta Hoese 1, erecting dk. York Creek Oil Co.'s Fulshear 1, dr deeper.

JIM HOGG COUNTY — Buchanan-Plateau Oil Co.'s No. 3, set cas. Rycade-Rydal Oil Co.'s W. P. Allen 1, sur 21, dr 1540 ft. Simms Oil Co.'s Wood 1, sur 84, dr. J. W. Pippin et al's Palacious 2, setting 6⅝-inch cas at 1065 ft. Plateau Oil Co.'s Martinez 5, spudding in. Buchanan et al's No. 4, dr below 1800 ft. Russell-Hoffman's David Vela ranch 1, dk; Givens 1, rigging up. Big Bend Oil Co.'s Martinez 5, cemented 6⅝-inch cas at 2030 ft; Martinez 6, dr below 1050 ft. Mirando Oil Co.'s No. 11, set cas at 2048 ft. San-Tex Oil Co.'s No. 1, sur 262, dr below 1200 ft. Texo Oil Co.'s Lopez 3, coring sand at 2894 ft; Lopez 4, dr below 1978 ft. Weber Oil Co.'s Holbein 4, sd 3486 ft. Plateau-Wheat's Nos. 3, dk; 4 and 5, lcns. Johnson-Detray's Vela 1, coring at 2260 ft. Plateau-Texas-Pacific's Freeman 2, no report; Freeman 5, dr; Freeman 6, set cas at 2002 ft. O. W. Killam's Martinez 3, set cas at 1705 ft; Vela 1, dk. Elliott-Texas-Pacific's No. 2, dr below 2280 ft.

LIVE OAK COUNTY—Grubstake Investment Assn.'s Nichols 3, no report. Glasscock & Fallin's Charles Tips 1, dr below 500 ft. Southern Natural Gas Co.'s Nos. 9, dr; 10, lcn. Coquet et al's Hicks 1, dr. Ross Segunda Oil Co.'s No. 3, sur 2253, oil showing at 1949 ft.

ZAPATA COUNTY — H. J. McMullen's Serapio Vela 1, 2 and 3, lcns. R. K. Bateman et al's No. 1, sur 617, dr. Texas Co.'s Cuellar 1, lcn.

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PATENTS

Patents Obtained, Trade Marks, Patent Causes

JESSE R. STONE

Formerly Assistant Examiner United States Patent Office
Andrews, Streetman, Logue and Mobley
12th Floor Union N. Bk., Houston, Texas

PATENTS OBTAINED FOR INVENTORS

JACK A. SCHLEY

U.S. PATENT ATTORNEY
305 INTERURBAN BLDG., DALLAS

Maurice Hirsch & Allen Hannay

ATTORNEYS AT LAW

601-2-3 Goggan Bldg.
HOUSTON, TEXAS

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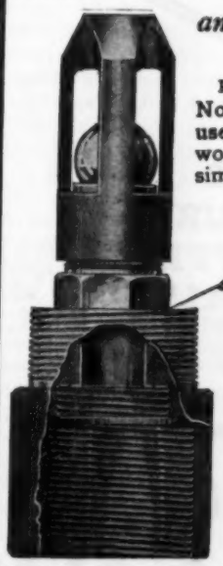
TEXAS OIL MAPS

County and District
Catalog on Application

HEYDRICK MAPPING COMPANY
Wichita Falls, Texas

Adams Combination Cuff and Standing Valve

Patent No. 1353303



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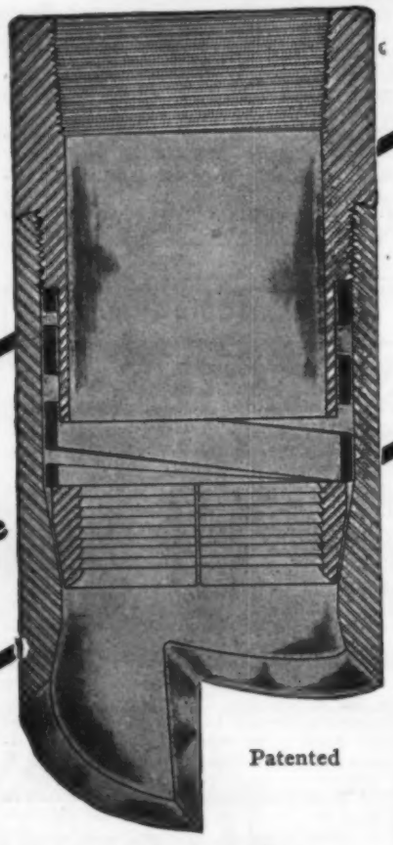

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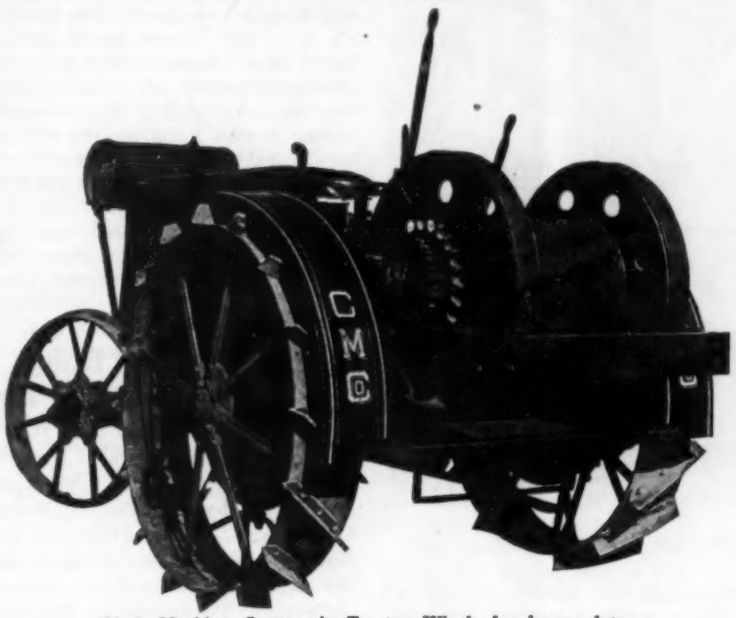


Clark Machine Company's Tractor Winch for heavy duty

Heavy Duty Tractor Winch For Oil Field Service

Clark Machine Company, Wichita Falls, Texas, is announcing an addition to its regular line of tractor winches, and is putting on the market a machine with unusually large capacity. The machine also has a wide range of speed for working at the well, or on the road.

A large drum, 20 inches in diameter spools 160 feet of tubing line without lapping.

The machine eliminates the snatch block on the well platform by backing up to the well and pulling directly from the drum, over the crown block.

Working parts of the winch are so arranged that the operator faces the well with an unobstructed view of the work being done.

Two powerful service brakes, 37 inches in diameter with a 4-inch face control the machine.

Power for the outfit is furnished by a 4-cylinder, heavy duty motor, equipped with a Bosch magneto which has an impulse starter, Kingston carbureter with air cleaner.

The outfit is manufactured and sold by the Clark Machine Company, Wichita Falls, Texas, and this company will furnish further information on request.

Drawworks Makes Use of Fluid Pressure Control

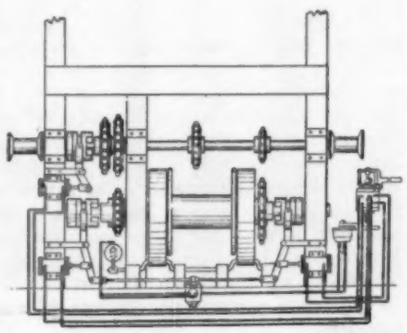
A draw works equipped with means for applying fluid pressure to operate the clutches and brakes, and embodying also novel types of valves through which said fluid pressure may be controlled and applied, has recently been patented by Lee Wilkinson, of Sour Lake, Texas.

The clutch controlling valve mechanism embodies a hollow cylindrical casing with the inlet pressure line entering the bottom thereof. Within the cylinder there is a close fitting valve which is mounted on a valve rod. This rod has its lower end fitted through a suitable bearing in the lower end of the casing and the rod works through a stuffing box carried by the upper end of the casing.

An intermediate section of the rod is formed with a substantially square section which fits into a lateral slot cut in the valve, and a coil spring surrounds the valve rod and is interposed between the top end of the casing and the valve. The valve rests on an annular rib, preferably formed integrally with the rod. The valve is somewhat shorter than the inside lengthwise diameter of the casing, and has a limited endwise movement therein.

The valve is cast substantially hollow so as to provide the channels through it from end to end. The pressure fluid entering the casing will pass upwardly through the channels to the chamber in the casing above the valve. Pressure lines enter the casing through tapped holes.

The drawworks has been tried out in Texas Coastal fields and has been found successful.



Further information will be supplied by L. Wilkinson, Sour Lake, Texas.

Conservation Equipment Made by Texas Firm

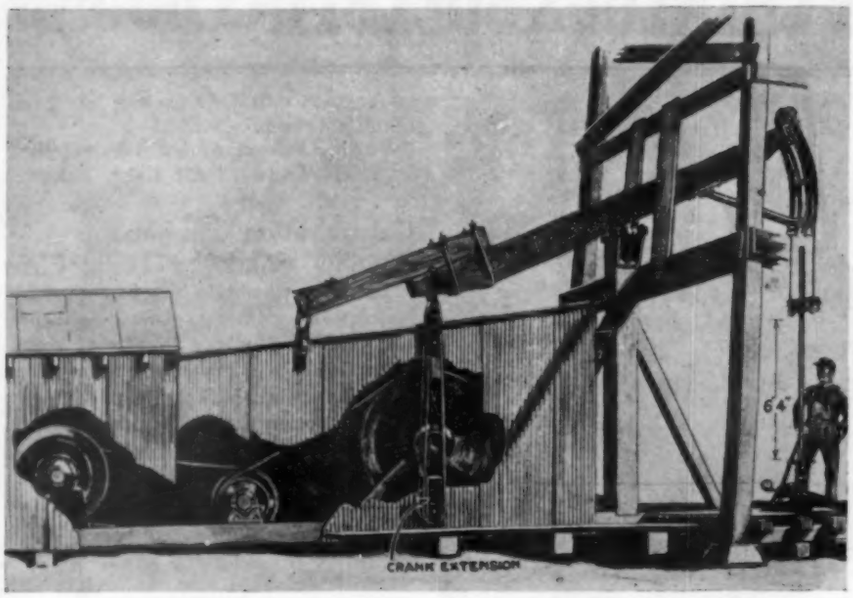
In order to obtain the best possible protection against evaporation and fire, the General Machine Works of Houston, Texas, has developed a combination breathing valve, flame arrestor, and automatic snuffer to be used on tanks equipped with vapor-tight roofs.

The valve body accommodates the pressure and vacuum relief valves, both of which are contained in a cage. By removing the cap from the vent, which is done by hand and without the aid of wrenches, the cage containing the valves and their seats may be pulled out of the valve body for inspection or cleaning. The tendency for the valves to stick has been completely overcome in this design by eliminating the use of guide wings or guide stems. The valves are held central by the vertical bars of the cage and no matter what position the valves may be in under working conditions, they will drop back on their seats without sticking, when the pressure is equalized.

The valve seats are knife edged and beveled off to allow any precipitation to run off as soon as it is formed. In other words no oil will accumulate on the valve seats, gum it up and cause sticking of the valves. The top of the valve is also made sloping allowing precipitation to run off to a place where it will do no harm.

Another feature of the new vent is that only one single passage way is used, through which the gases can leave the tank or the air enter into the tank. Two forty-mesh Monel metal screens are placed in this passage way, acting as a flame arrestor on the same principle as the miner's lantern. The screens are contained in a frame which can be withdrawn from the apparatus by loosening a number of thumb screws. The screens illustrated in the cut are placed outside of the valves and protected from the elements by a suitable hood.

The hood is finished at the end and forms a valve seat for a large valve or door which under ordinary circumstances is held open by a chain and a fusible link, located in front of the flame arrestor. Should the gases issuing from the tank happen to catch fire, from lightning or some other cause, the fuse link will melt and the door will be slammed against the seat by the counterweight, shutting off the opening of the vent, extinguishing the flame. Actual tests conducted in the shop with a mixture of city gas and air, showed that the automatic door or



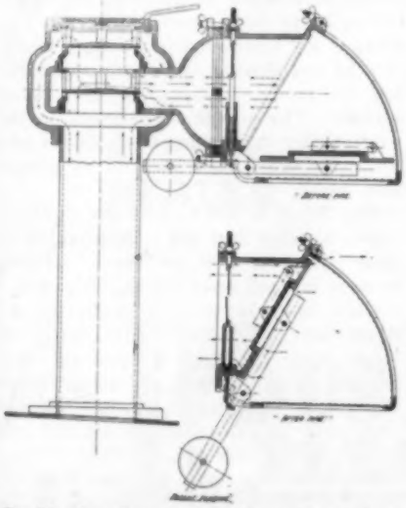
Grant long stroke pumper showing crank extension and countershaft

snuffer would extingush the flame in fourteen seconds after the gas was ignited.

Should the tank resume breathing after the flame has been extinguished, then the door of course will open again by the additional pressure built up in the tank or in case of a partial vacuum in the tank the small valve located in the large door will open allowing air to enter into the tank, preventing the roof from collapsing.

Tank fires are not always detected immediately and the snuffer therefore is made to close automatically, shutting off the fire before it can do any further harm. After the snuffer has done its work, the apparatus will keep on functioning at but slightly increased pressures until a new fuse can be put in.

The automatic snuffer is entirely screened in with heavy hardware cloth to keep birds from building nests inside of the hood or leaving deposits on the valve. It also guards the Monel metal flame arrestor against mechanical injury.



Combination Conservation Vent, Flame Arrestor and Automatic Snuffer, manufactured by the General Machine Works, Houston, Texas.

Though separate openings are recommended for this purpose, this vent could also be used for thief hole. At least two vents to each tank are recommended, the size and number depending on the vapor forming properties of the oil stored in the tank.

Further information regarding this new vent valve will be gladly furnished by the General Machine Works, Houston, Texas.

Economy Is Big Feature in Grant Long Stroke Pump

Operators in the Los Angeles Basin fields have been giving much attention recently to long stroke pump attachments, and one of the latest to be placed on the market is the Grant long stroke pumper, invented by Bert Moss and manufactured and sold by Grant Forge Shops, 2042-44 East Vernon Avenue, Los Angeles, Calif.

The new device makes possible a stroke of six feet four inches, through an extension of the crank and a countershaft. The device can be installed at a pumping well in less than a day's time. It was placed on a pumper at Long Beach and production was increased from 135 barrels to 550 barrels a day.

Features of the Grant long stroke are the low initial cost, low installation cost and low maintenance, when once installed.

A countershaft is placed midway between the standard engine and the band wheel. Two pulleys, carrying standard size belting, serve as a multiplier of power and at the same time take out most of the vibration and racing of the engine on the down stroke. The even up-and-down motion is said to eliminate a great percentage of rod troubles.

The long stroke of the beam is accomplished by a crank extension that is securely bolted to the original crank, eliminating extra work and expense of installing a new crank. The beam hook up is of the "horse head" type, marketed as the Grant polish rod control, which eliminates side strain of the polish rod. A rod grip of special heavy design is also a part of the unit which easily withstands the terrific strain that is encountered with the 6-foot stroke.

Additional information can be obtained from the Grant Forge Shops, 2042-44 East Vernon Avenue, Los Angeles, Calif.

Portable Diamond Drill For Structure Testing

A type of diamond drill rig which possesses all the desirable features for structure testing work is being put on the market by the Sullivan Machinery Company, 122 South Michigan Avenue, Chicago, Ill. Special features claimed for this machine by its manufacturers include: 1. Portability. 2. Economy of water. 3. Economy and ease of transportation of fuel.

To make the diamond drill as easily moved from place to place as possible, this new rig, which is known as the Sullivan "CN" mounted diamond drill with gas engine drive, is mounted on one end of a substantial steel truck equipped with large diameter wide steel wheels. At the other end of the truck is mounted the engine from a Fordson tractor, forming a substantial, compact and complete little power plant which operates the drill through a telescopic shaft in the bed of the truck.

The third member of the unit is a duplex double acting high pressure pump which is used to supply wash water to the drill hole, and for the hydraulic cylinder.

The drill is the standard Sullivan CN machine with single hydraulic cylinder, and fittings which bore a hole 2 13/16 inches in diameter, and which removes a 2-inch core, the standard size for structure drilling work. The regular engine with which ordinary drills are equipped has been removed, and both the drilling and hoisting operations are powered through the telescopic shaft from a Ford engine. When the drilling operation is interrupted to hoist rods or to set casing, the rods are held in the safety clamp in the usual manner, and the drill is run back on its sliding ways. The standard Sullivan hoisting drum with which these machines are equipped, has internal gears which provide different speeds, and is of ample capacity to take care of stand piping, drive piping or setting casing.

This outfit can be hauled by a tractor a team of horses over country roads or rough territory, such as is frequently encountered in oil field pros-

pecting. It is a thoroughly substantial, strongly built rig.

The absence of a steam boiler cuts down the supply of water required one-third at least. This is an important factor in countries where water must be hauled to the machine.

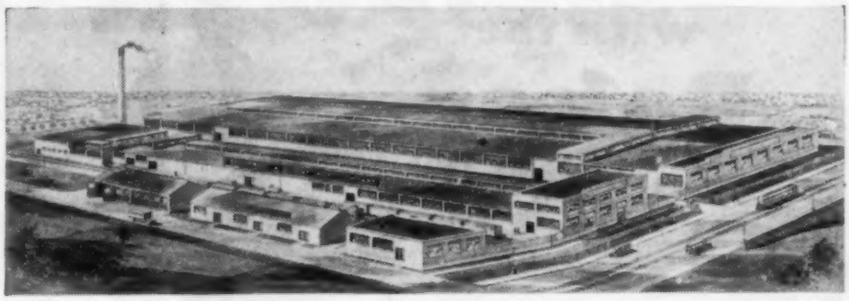
The third element, that of fuel, is also an important factor. The Ford engine starts on gasoline, but runs on kerosene, which, of course, is easily obtainable, and much easier to haul to the outfit than coal or wood.

The Sullivan CN mounted diamond drill is a thoroughly proven and standardized rig which is proving of interest to oil men wherever structure work is carried on. The capacity of this machine, 1000 feet, is ample for practically all structure testing needs. For operating the drill at night a little generator is provided, which is operated by a chain belt from the engine. and which furnishes sufficient current to handle three Ford headlights which are furnished as part of the equipment.

The new rig is described in Bulletin 80-0, which will be sent on request to the Sullivan Machinery Company, 122 South Michigan Avenue, Chicago, Ill.

B. & B. Rope Company Expands Plant Facilities

St. Louis, Mo.—A constantly increasing volume of business has again necessitated the expansion of the Broderick & Bascom Rope Company. They are now housed in their new $1,000,000 fireproof plant, occupying an entire city block in the so-called industrial section of northwest St. Louis.



New Plant of Broderick & Bascom Rope Company, St. Louis, Missouri

The factory is ideally located, as it adjoins the tracks of the Terminal Railroad Association, whose belt lines intersect and connect with all railroads entering St. Louis.

The factory proper, occupying the north side of the site, is 142 feet wide by 494 feet long. Foundations are concrete to support the heavy "laying up" and "stranding" machinery. The walls are brick, floor and roof are concrete. Steel trusses support the roof. Daylight floods every corner, with monitor skylight and daylight construction the entire length of the building.

South of the factory, parallel to and separated from it by a 20-foot open concrete space, is another building unit, 84 feet in width by 494 feet in length. The eastern end is of two-story construction, the second floor being occupied by the company's factory office. The lower floor comprises the warehouses for wire, finished rope, the spooling and testing department, a complete machine shop and blacksmith shop, engine room and boiler house. This building is also brick, with concrete roof and floors and steel trusses.

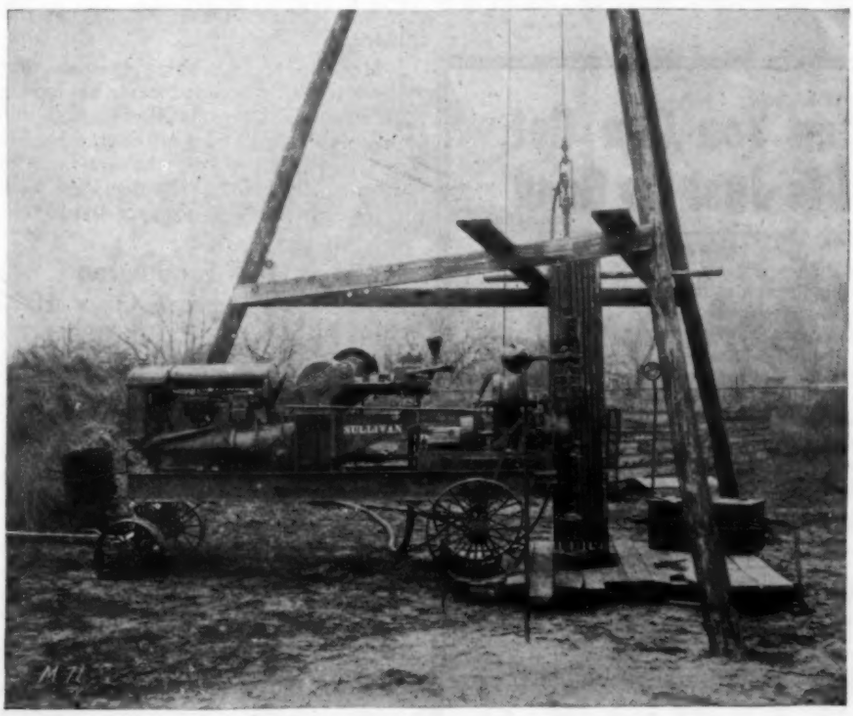
The boiler house has a capacity of 900 horsepower with coal bins having a capacity of 500 tons. Coal is handled with power conveyor. Engine room is equipped with a 350 K. W. Hamilton engine and Westinghouse generator. A reserve engine and generator of equal capacity will shortly be installed. Foundations are now in place ready for the equipment. All power used is manufactured by the company and is direct current type.

Machine shop and blacksmith shop are complete in every respect. Here all of the wire rope machinery used in the plant is built and maintained. Wire warehouse, with special bins provided, has a storing capacity of 8,000,000 pounds of wire. The entire layout is a one-way proposition. Starting with the loading and unloading platform, wire is unloaded, weighed and tested and put in specially constructed bins. From the bins it is taken to spooling room, immediately adjoining, and wound up on spools; then transported across open concrete passageway by electric power-driven lift trucks, to the machines in which the wire is to be made up into strands; after stranding process has been accomplished strands are put into closing machines, conveniently near, and laid up into finished rope and placed in warehouse with an electric truck specially designed for this work. This constitutes a movement in which there is no backward step whatever, thereby facilitating the output with increased economy.

The double track switch adioins the warehouse building at the south, to facilitate the handling of raw and finished material and shipment of same and to take care of coal requirements.

Three smaller buildings occupy the south side of the site. These are the core house, carpenter shop (in which all wire rope spools are made) and

(Continued on page 92.)



Sullivan diamond drill for structure testing work

be "SURE" with the Baker

"Sure Shot" Cement Plug

After the cement is put in with a dump bailer the Baker "Sure-Shot" Cement Plug is run on the bailer and set in the casing shoe, before the casing is lowered; sealing the bottom and forcing all the cement up around the pipe and out into the formation as the casing is lowered.

There's no haphazard guessing when the Baker is used—it is a "sure-shot" device for finishing up a per-fect cement job.

Baker Casing Shoe Company

Box 264-C, Huntington Park Station, Los Angeles, California

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Prompt and Efficient Service

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Why Buy New When You Can Get Second Hand That Is Just As Good

10,000 ft.	5-3/16"	17 lb. used casing
3,000 ft.	5-3/16"	20 lb. used casing
6,000 ft.	6-5/8"	24 lb. used casing
6,000 ft.	8-1/4"	32 lb. used casing
6,000 ft.	10"	40 lb. used casing
2,000 ft.	12½"	50 lb. used casing
1,000 ft.	15½"	70 lb. used casing
250 ft.	20"	90 lb. used casing
20,000 ft.	3"	used line pipe
20,000 ft.	4"	used line pipe
15,000 ft.	6"	used line pipe
30,000 ft.	8"	used line pipe

We own and can make immediate shipment of this pipe from our Texas yards.

Keystone Pipe & Supply Company

Eastern Headquarters: Butler, Penna.

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General Manager for Jarecki Passes Away

Pittsburgh, Pa.—Elias Alexander Weart, general manager for the Jarecki Manufacturing Company, passed away early Sunday morning, April 26, 1925, at Pittsburgh, following an operation. Funeral services were held at the residence of his daughter, Mrs. John W. Kelley, 5531 Ellsworth Avenue, April 28, with interment at Middleville, N. Y.

He is survived by his two daughters, Mrs. John W. Kelley and Mrs. James W. Graves of Herkimer, N. Y.

Had Mr. Weart lived until the first of the coming July he would have celebrated his 53rd anniversary with the Jarecki Manufacturing Company. He was active up to his last illness and was the pioneer of the supply industry, at the time of his death, being the oldest active man engaged in the business.

During his activities he was located at Pithole, Shamburg, Bradford, Foxburg, and for the past 35 years lived and made his headquarters at Pittsburgh. Mr Weart was a member of several of the clubs in and about Pittsburgh and took an active part in the civic affairs of the city and did his part to build up greater Pittsburgh.

Thomas Kinney Retires

Casper, Wyo. — Thomas Kinney who has been connected with the Illinois Pipe Line Company for some twenty years and who has been general manager of the company's activities in Wyoming, has resigned. He has a very extensive acquaintance in the oil industry in the Rocky Mountain region and elsewhere and is familiarly known to all leaders in the industry in this section.

Mr. Kinney is retiring because of a need for an extended rest, he having undergone a serious illness last fall that was followed by an operation. He is credited with being the first man to start work for the Illinois Pipe Line Company in the Wyoming division.

Russian 1924 Production Shows Increase Over 1923

Washington, D. C., May 11.—The gross petroleum production of Russia during the first quarter of the economic year 1924-25 (ended January 1, 1925) was 1,655,420 tons according to statistics published by the All Russian Naphtha Syndicate. This is an increase of 17 percent over the production for the same period of the preceding year. During the past economic year the Soviet is reported to have shipped abroad 712,000 tons of oil, compared with 210,000 tons during 1922-23. The president of the Syndicate has stated that up to January of this year the Syndicate concluded contracts abroad for the sale of 1,020,000 tons of oil products.

SHAFFER GAUGE

For Your Boiler's Sake Use the Best

Extra fibre or babbitt wheels 25c each at any supply store.

Buy a set from your supply store and you'll wonder how you ever got along without them.

Made in two sizes ½ or ¾ inch

Price $2.25

ALL PARTS ARE INTERCHANGEABLE

PARTS PRICE LIST

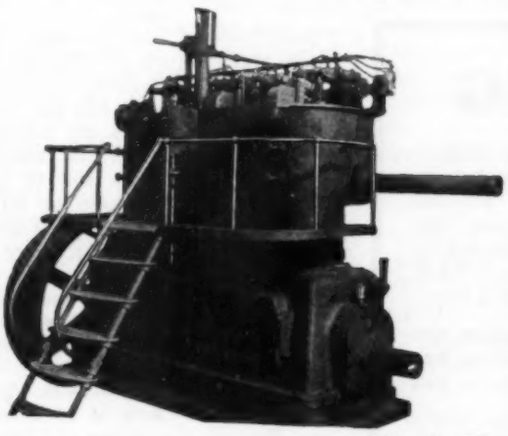
Handle	.90c
Brass stob (½ or ¾-inch)	.90c
Fibre or babbitt wheel	.25c
Stud bolt and Nut	.25c

J. E. SHAFFER COMPANY

315-316 Mid-Continent Bldg. Tulsa, Oklahoma

Bruce-Macbeth Gas Engines EFFICIENCY

A Gas Engine of Advanced Design



When contemplating the Electrification of your lease, Gasoline plant, Refinery, etc.—Bruce-Macbeth Gas Engine direct connected to generators, is not excelled by any other prime mover for paralleling any number of units, under all load conditions.

Time Tested Power Plants

Specify Bruce-Macbeth Gas Engines for your next plant

THE BRUCE-MACBETH ENGINE CO.

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J. B. SIMLER, District Manager
209 South Cincinnati Avenue Tulsa, Okla.

ECONOMY Bruce-Macbeth Gas Engines

NECO Will Give Longer Service Under Extreme Conditions

Non-Corrosive Ball and Seat

Accurately machined from a special alloy steel. Perfectly hardened. Ground in pairs.

For Lode Stone use NECO Non-corrosive Seat with Bronze Ball.

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Stocked by OIL WELL SUPPLY CO.

Attention Field Managers and Purchasing Departments

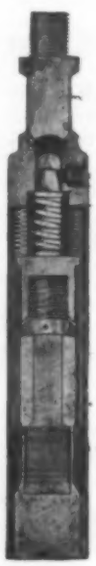
Reduce your tubing jobs by using Ewing Patented Hydraulic Standing Valves, made with regular and oversize balls and seats.

Stocked by all Leading Supply Companies and Made ONLY by

Sour Lake Machine & Supply Company

Sour Lake, Texas

SOME FISHING



FIFTEEN MINUTES after rigging up, the LEONARD COMBINATION SUCKER ROD SOCKET had been run down a 2700-foot hole at No. 8 Kophay of The TEXAS COMPANY in the Wynona District and was ready to come out with a working valve and stem which had parted in the 3-inch Barrel off the rods, and TEN MINUTES later everything was out on the derrick floor.

The LEONARD SOCKET was run in on a wire line, the total time for the rig up and take down consuming but TWO HOURS, less time than it would even take to pull the 7/8-inch rods out of the hole.

The hold is secured after the piece fished for enters the barrel of the Socket by TRIP ACTION and not by friction, jar down or screw on operation, consequently the REASON.

Baird Supply Company

TULSA, OKLA., U. S. A.

AJAX Gas Generators—Dikart Protector Guides—Kliewer Steam Snuffers

B. & B. Rope Company Expands Plant Facilities

(Continued from page 89.)

garage. All buildings are fireproof throughout and equipped with all the necessary tools and machinery which constitute a strictly up-to-date manufacturing plant. Shower baths are provided throughout the buildings.

The plant was designed by E. P. Frederick, general superintendent and chief engineer of the Broderick & Bascom Rope Company, who has been with the company since 1877. Mr. Frederick also supervised the erection of the building and installation of all machinery.

TRADE PERSONALS

J. W. Anderson of Kansas City, assistant general manager of sales of the Sheffield Steel Mills and the Kansas City Bolt and Nut Company, has recently completed a tour of the Mid-Continent oil country that included a visit to the Tulsa offices of the company in charge of W. L. Kennedy, district sales manager.

R. N. Atmore, sales manager of C. C. Fetty & Co. of El Dorado, Kan., has returned to his offices in Tulsa after a field trip through the Oklahoma and Kansas fields in the interest of the Fetty long stroke pumping attachment.

W. M. Bovard, secretary-treasurer of the Bovaird Supply Company, has returned to Tulsa after an extended business trip in the North and East, where he visited Pittsburgh, New York and other points.

L. D. Baird of the Baird Supply Company of Tulsa recently completed a field trip through the Northern Oklahoma and Kansas fields.

Jack Mellon, sales manager for the Dunn Manufacturing Company of Oxnard, Calif., manufacturers of Dunn Safety oil well tools, left Los Angeles early last week for a six months trip to the Mid-Continent and Eastern oil fields. His first stop will be in New Mexico and from there he will visit all the fields of Texas, Oklahoma, Louisiana and Arkansas, after which he will make a three months trip to the Eastern oil fields, including the states of Ohio, Pennsylvania, New York and then to Canada before returning to California.

N. M. Muier now is with the Griscom-Russell Company of New York and is in charge of the Mid-Continent offices located at 935 Kennedy building in Tulsa.

Los Angeles, Calif.—D. H. Greenwood, manufacturer of oil field specialties, as well as representative of several other similar concerns in California, has moved his office and shops to 287 San Fernando Road, Los Angeles, to take care of his increasing business.

LETTERS OF Paul Peebles P.S.G.

mi deer cleopatry

well cleo hunny it is beginnin 2 look now like mabe I will not git to cum down 2 sea yu after all next week on account sumboddy has made a mistake & I hav got 2 go 2 cort. now yu need not be werried hunny about that because it is difrent from what yu expeck about it. I hav bin 2 cort before when it was not no mistake made, but this time I am goin 2 be a jury or at least that is what the ossifer sed when he sed for me 2 cum up there. I aint never bin on no jury till yet but at last they hav recoernize mi standin in the community & the judge has sent for me. I can remember from times I hav bin in the cort house that it is quite a important thing to sit on a jury, because they hav speshul seatse for the jury 2 sit in rite up clost like the boxes in a show & everything & evry body calls the jury gentlemen, even the judge. then they all stand up hold up there hands like they was joinin a lodge or sumthin & sumboddy mumbles sumthin whitch dont noboddy no what they says & then the judge astes them is they qualified voters & all that & householders in the co or free holders in the state. well that last part has bin werryin me sum so I asted a lawyer frend of mine what did it meen & he sed it meens do yu boss a house or own enny land, so I dont know if I had better tell them that I live with a widder or not. mabe they will not understand what I meen. but ennyway I guess I am moar boss of the house than most married men what will be there.

I shore do hope that that onnery slim is arested for sumthin while I am on the jurry. what I will do 2 him will be a plenty. he ort 2 be sent up on genral principles & I hope they fix it so I can help.

it looks like mabe now that I will be a pretty bussy man next week & it is a good thing that I hav not got no geeology bizness whitch is pressin rite now, on account I told yu about the advertisin mens convenshun whitch is cummin 2 huston. I hav got a important job in that & will hav 2 atend 2 it in between times on the jurry, because it cood not be no good meetin of the convenshun unlessen I took part. I gess I will hav 2 play hooky from the jurry on the end of the week so as 2 go on the trip whitch I told yu about 2 libberty & goose creek, but I will be in sutch a hurry 2 git back 2 huston 2 git back on the jurry that I will mabe not hav no time 2 sea yu. so I am tellin yu now so that yu will understand. I gess yu had better not be around on the streats that day on account of the ad men whitch will cum down the same time I do, because I do not want none of them gittin stuck on you, so you stay at the house & I will come around if I can git a chanst 2 slip off from them for a minnit.

hunny I was 2 bussy 2 rite 2 you last week because I had 2 rite a business letter up 2 washinton at the time I gennerly rites 2 yu, espectin that I wood rite 2 yu latter, but the widder where I bordes at tooken a noshun that she wanted me 2 drive her over 2 bomont & pt, arther in that car whitch I borten for her, so I had 2 do it. now yu need 2 not git yor back up about it, because yu think I cood cum 2 sea yu if I had time 2 take this widder 2 bomont, because it is a difrent matter entire on account I wanted 2 go 2 bomont 2 sea if they are still werkin at ole spinnel top & also 2 sea if the refinries are runnin at port arther all rite. well now I no they are, only the gullf has got sutch a big one that I cood not tell if all of it is runnin or not. also I wanted 2 sea how the rodes is over 2 libbery on account I hav got 2 go over there pretty soon & wanted 2 be familiar with the rode. & besides that, hunny, this widder where I bordes has got a way of havin me do what she wants me 2 do. we had a pretty good time on the trip & I gess it will allwaze stick up in mi memmery that it was not no punchters on the trip like I had that 1 sundy whitch I was tellin yu about when I had so menny punchters in the tires & also in mi pants.

I aint made no contribushuns 2 scients in the last few daze on account I hav kinder laid off the inventin trade for a spell on account of getting reddy for the ad men convenshun. but it was sum electricity birds in town this week havin a meetin up 2 mrs. rise's bordin house that hav giv me sum encouragements on mi electric radyo bettery in the ground propershihun whitch I am goin 2 call the peebles patent oil feeld light & power generatin earthen storedge battery, because it will utilize abandoned well casins & the chemikal ashun of the underground watters in makin current pretty cheep. well these fellers whitch was hear is all in the lectricity bizness & sum of them hav big investments in the obsolete mechanical generators of current commerse & also in plants makin them kinds of masheens, so I did not spring mi propersishun on them on account of not wantin 2 make them feel bad while they is gests in mi own home town. but these birds noes sumthin about their onions & they is playin rite in2 mi hands when they say that a possibul develepment of the future will be cold lite threw radyo activvity of painted walls. this will meen hunny that when I git mi oil feeld batries 2 werkin evryboddy will have there houses lit up without no trubbel only paintin the house with a petented paint whitch I will patent for the purpose & whitch I will make so it will ware out so that I can keep on sellin paint for renewals. I gess I will go in the shade bizness 2 on account yu cant blow out the lite & nite when yu git reddy 2 go 2 bed so it will hav 2 be a law for evryboddy 2 hav shades & pull them down so the nabers will not hav 2 stay wake all nite watchin what is goin on.

of corse the cold lite will make the houses pleasant in the summer time & the same radyo will heet up in the winter whitch will make things lovely all around. also a skeem will be werked out so that the radyo will make everything we need 2 eat so that it wont be mutch use of werkin except 2 git close. all in all hunny the future is goin 2 be brite—no nites a tall enny moar whitch will be kinder hard on nite watchmens but they will hav one advantage that they will alreddy be use 2 sleepin in the day time whilst all the rest of us will hav 2 lern that. it will also be hard on the chickens when the werld is all lit up so they will not no when it is time 2 go 2 roost.

I no hunny that yu are proud that I am the master mind whitch will make all of this possybul. but it aint nuthin 2 me. it is just natral for me 2 studdy out scientifick things like this both for the bennyfits on the werld & so that I can make enuff munny that me & you can git married like we hav planned 2 do. I gess I will be ritch now alrite, eh hunny.

well I must close now & go down & sea if enny of the boys has got in from london for the convenshun. mabe they swiped sum of the kings stuff & brung it along with them 2 kinder livin up things.

yore lovin paul

For Convenience and Quick Service

THE LAYNE

SCREENS,
PACKERS,
SETTING TOOLS,
ETC.

Are Carried in Stock at All Times

In Liberty Oil Field, by	Rex Supply Co. Sour Lake Machine & Supply Co.
In Orange Field, by	Rex Supply Co.
In Hull Oil Field, by	Rex Supply Co.
In Mirando (Texas) Oil Field, by	Mirando Lumber Co.
In Sour Lake, Saratoga, Batson Fields, by	Rex Supply Co. Sour Lake Machine & Supply Co. Saratoga Supply Co.
In Vinton, (La.) Oil Field, by	Ged Iron Works.
In Eldorado, (Ark.) and Surrounding Fields, by	Continental Supply Co. Republic Supply Co.

All Supply Houses can Quote and Supply
you with the Layne Products.

24 HOUR SERVICE—7 DAYS IN THE WEEK

Layne & Bowler Company

Houston, Texas

SQUEAKS FROM THE BULL WHEEL

He Was a Good Boy

A young man who was not very well acquainted with the ways of the city went into a fashionable restaurant for dinner. Not recognizing the different dishes by their French names, he skipped about over the menu, scratching the names of the things that sounded best. When the waiter arrived with the soup, it was eaten without comment. The celery followed and was likewise eaten, but when the crab arrived, the poor man exclaimed: "I've been a good boy. I have drunk your dishwater, eaten your bouquet, but I'll be darned if I eat that bug."—Magnolia Oil News.

Cop: "Hey, where are you going? Don't you know this is a one-way street?"

Abe: "Vell, I'm only going von way, ain't I?"

The butcher found a homeless dog,
A worthless little bum:
And as he led him home, he said,
"The wurst is yet to come."

Stage Manager: "My dear, I wish you would wear a different gown in the second act."

Rita Ravenyelp: "But that is the latest style, and I paid two hundred dollars for it."

Stage Manager: "That may be true, but when your husband says: 'Woman, you are hiding something from me,' the audience can't figure out what he means."

Stella—She: Don't you love driving a night like this?

J. D.—He: Yes, but I thought I would wait till we got further out in the country.—The Lariat.

Eve said to Adam: "Dear, which shall I wear to the party tonight, my maple leaf or my fig leaf?"

Adam said: "You'd better wear your poison ivy; it's going to be a rough party.—Arizona Who Doo.

Automatic

"Our dining room is being decorated in spatter work."

"Spatter work?"

"Yes. We have grapefruit for breakfast every morning."—American Legion Weekly.

Tit for Tat

Private Jones was summoned to appear before his captain.

"Jones," said the officer, frowning darkly, "this gentleman complains that you have killed his dog."

"A dastardly trick," interrupted the owner of the dog, "to kill a defenseless animal that would harm no one!"

"Not much defenseless about him," chimed in the private heatedly. "He bit pretty freely into my leg, so I ran my bayonett into him."

"Nonsense," answered the owner angrily. "He was a docile creature. Why did you not defend yourself with the butt of your rifle?"

"Why didn't he bite me with his tail?" asked Private Jones with spirit.—Wallace's Farmer.

Hard Luck Indeed

Lady (visiting prison): "And how did you come to be put in here, my good man?"

"I'm unlucky," declared the imprisoned wood alcohol vender, who was in a confidential mood. "One of my customers didn't go blind, and he identified me."

Husband (waking suddenly at 11:30): "What in the world was that noise?"

Wife: "It's all right, dear. The people are coming home from the opera and I slipped down and gave our front door a slam, so the neighbors would think we'd been there."—Boston Transcript.

Betty: "Is your Packard friend coming tonight?"

Billie: "No."

Betty: "Dodge Brothers?"

Billie: "No, dearie, this is Willys-Knight."—Cappers.

Visitor (at private hospital): Can I see Lieutenant Barker, please?

Marton: We do not allow ordinary visiting. May I ask if you're a relative?

Visitor (boldly): Oh, yes! I'm his sister.

Matron: Well, well!! I'm very glad to meet you. I'm his mother.

Willie—Our cat has kittens.

Jimmie—What did you expect her to have?

Deacon Miller was going to Chicago on business and while there was to purchase a new sign which was to be hung up in front of the church advertising a new religious movement. He copied the motto and dimensions of the sign, but went to Chicago and left the paper in his coat at home. When he discovered that he had left the paper at home, he wired his wife: "Send motto and dimensions." An hour later a message came over the wire and the young lady clerk who knew nothing of the previous wire, fainted. When they looked at the message she had just taken they read: "Unto us a child is born, 6 feet long and 2 feet wide."

He risked his life to rescue the fair maid from a watery grave, and, of course, her father was duly grateful.

"Young man," he said, "I can never thank you sufficiently for your heroic act. You incurred an awful risk in saving my only daughter."

"None whatever, sir," replied the amateur life saver; "I am already married."

An Irishman went into a restaurant on Friday and asked: "Have yez any stewed whale?"

"No," said the waiter.

"Then ye can bring me beef steak," said Mike. "Lord knows, I tried to get fish."

It happened in a Baltimore market. "What," said a woman customer of one dealer, "is the price of these chickens?"

"A dollar and a quarter apiece, ma'am," replied the dealer.

"Did you raise them yourself?" asked the lady.

"Oh, yes, ma'am. They was only a dollar ten last week," was the reply.—Judge.

Bones: What did your wife say about you're being out so late the other night?

Jones: Don't ask me yet. When she gets through with the subject, I'll condense it for you.

"I suppose now you wish you were free to marry again?"

"No, dear, just free."—Pele Mele (Paris).

Kavanaugh Combined
SLIP and COMBINATION
SOCKET

Serves the purpose of two sockets. Will catch either round or square. Best and most rugged fishing socket made. Write for circular and prices.

We also make full line of drilling and fishing tools.

Norwalk Drilling Tool Co.
NORWALK, OHIO

Hotel Lassen
WICHITA

The Hotel Lassen policy means economy for the traveling public. Popular prices accommodate all, yet equipment and service are the best. Right in the business, theater and shopping district.

350 FIRE PROOF ROOMS

From $2.00 *per Day*

Rate Schedule Which Never Changes

	1 per.	2 per.
42 Rooms, Lavatory	$2.00	$3.00
82 Rooms, Private Bath	2.50	4.00
83 Rooms, Private Bath	3.00	4.50
30 Rooms, Private Bath	3.50	5.00
35 Rooms, Private Bath	4.00	5.50

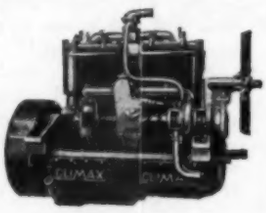
Large parlor rooms—twin beds for two persons—at prices slightly above this schedule.

Nearly Everybody Stops at the Lassen

HOTEL LASSEN
WICHITA KANSAS

DRIVE Your Rotaries, Mud Hogs, Powers, Short Pipeline Pumps, Lighting Generators, Electric Drilling and Pumping Motors, also Cable Drilling Machines, with

CLIMAX *Trade Mark Reg. U. S. Pat. Off.*



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—for gasoline power. 15% less with natural gas.
Lightest Heavy-Duty Engines made—Price is Right.

CLIMAX ENGINEERING COMPANY
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Mid-Continent Office: Wells Hotel, Tulsa, Okla.

Built in
50-55 H.P. Size
70-80 H.P. Size
105-120 H.P. Size

DON'T CEMENT YOUR WELLS WITHOUT A

MacCLATCHIE QUICK CHANGE HEAD

FAST
SAFE
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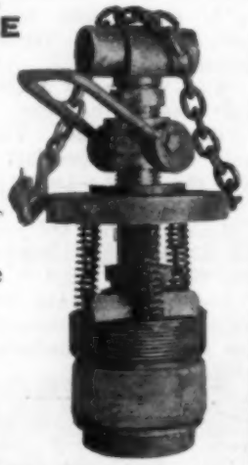
They will stand more pressure than your Casing

All sizes 4¼" to 18".



MacCLATCHIE MFG. CO.
COMPTON, CAL.

OIL AND GAS LEASES MARATHON FOLD WEST TEXAS

The greatest undeveloped potential oil area in this country today! We pioneered this country and can absolutely deliver our offerings! Here are a few:

18,000 acres. University permits, dated October 1, 1924, for five years, joining University permits of Sun Oil Co., Gulf Production Co., Standard of California. Gulf, Transcontinental, Arkansas Fuel now drilling and more wells to start. Prices right. Pecos County.

20,000 acres, 10-year leases, Crockett County; large and small blocks adjoining best companies.

5,000 acres, 10-year leases; close to drilling wells; Upton County.

133,000 acres Pecos County, near blocks of Arkansas Fuel, Phillips Co., and Pittsburgh operators. Low in price. Will sell in blocks or arrange for wells. Will allow time for geological inspection.

3,000 acres, 10-year lease. Upton County; near drilling well and adjoining leading company holdings.

2,010 acres, Irion County; 10-year lease. Close to blocks big companies. Near drilling wells.

15,000 acres, Loving County; 10-year lease. 10c rental. On line with Artesia, New Mexico, production. Will allow time for geological inspection.

Prices and maps on request.

C. W. WEBSTER
W. T. Waggoner Bldg., Fort Worth, Texas
Reference Mercantile Agencies

Petroleum Division A. S. M. E. Growing

Tulsa, Oklahoma,—More than 300 members have now joined the Petroleum division of the American Society of Mechanical Engineers, according to E. A. Clark, president of the Mid-Continent division of the A. S. M. E.

Prof. W. R. Eckart of Leland Stanford University, has been chosen as chairman of the division and Max Thornburg of the Standard Oil Company of California is the first secretary. W. R. Paine of the Indian Territory Illuminating Oil Company, Bartlesville, Oklahoma, is vice president. Other members of the executive committee for the United States are: C. F. Braun of C. F. Braun & Co., Alhambra, Calif.; T. H. Kerr of Columbus, Ohio, and Walter Samans of Philadelphia.

The United States has been divided into four geographical groups so that the work of the Petroleum division of the A. S. M. E. can be animated. L. E. G. Bignell of the Parkersburg Rig and Reel Company, Tulsa, has been chosen as the first Mid-Continent chairman.

California Expects Large Sum From Tax on Gasoline

Los Angeles, Calif., May 11.—The State Board of Equalization estimates that the two cent gasoline tax will bring in to the state $15,700,000 during the year 1925. This tax is divided equally between the state and county, to be used exclusively for road maintenance and repair.

Gasoline tax receipts for first three months of 1925 reached a total of $3,449,077.39, a gain of $120,302 when compared with the same months in 1924. California automobiles consumed 172,449,869 gallons during the first three months this year.

The four larger companies of the state paid taxes on sales as follows, first three months of 1925 being compared with similar period of 1924:

	1924 Gallons	1925 Gallons
Standard	48,530,752	47,094,063
Shell	25,507,891	26,775,006
Union	20,293,734	19,504,025
Associated	19,557,127	19,341,950

Sullivan Appoints New Manager for El Paso Office

Chicago, Ill.—Sullivan Machinery Company announces the appointment of Earl E. Miller as manager of its El Paso, Texas, branch office, succeeding R. S. Weiner, who is transferred to the general office in Chicago.

Mr. Miller's experience of more than 13 years with this company, at its offices at Denver, Lima, Peru, and Paris, France, will enable him to serve Sullivan customers in the Southwest and in Northern Mexico very effectively.

GUIDE FOR PURCHASERS

Accountants—
F. C. Lancton

Air Compressors—
Continental Supply Co.
Gardner Governor Co.
Hope Engineering & Supply Co.
Southern Engine and Pump Co.

Air Lift Pumping Equipment—
Gardner Governor Co.
Sullivan Machinery Co.

Asbestos Roofing—
Johns-Manville, Inc.

Attorneys—
Hirsch & Hannay
Vinson, Elkins & Wood

Balls and Seats—
Bradford Motor Works
Continental Supply Co.
Norris Bros.
The Charles N. Hough Mfg. Co.

Band Wheels—
Continental Supply Co.
Emsco Steel Products Co.
International Derrick & Equipment Co.
Lee C. Moore & Co., Inc.
Parkersburg Rig & Reel Co.

Bell Nipples—
The Cunningham Co.

Belting—
Bridgeport Machine Co.
Continental Supply Co.
Frick-Reid Supply Co.
Gustin Bacon Manufacturing Co.
International Supply Co.
Oil Well Supply Co.
Republic Supply Co.
Stanley Belting Corp.

Bit Steel—
Central Steel Co.

Black Diamonds—
R. S. Patrick

Boilers—
Bridgeport Machine Co.
The Brownell Co.
Continental Supply Co.
Frick-Reid Supply Co.
International Supply Co.
The National Supply Cos.
Oil Well Supply Co.
Republic Supply Co.
Regan Forge & Engineering Co.
Star Drilling Machine Co.
Titusville Iron Works Co.
United Iron Works, Inc.
See Oil Field Supplies and Tanks

Boiler Tubes—
The Tyler Tube & Pipe Co.

Blowout Preventer—
Baash-Ross Tool Co.
Cameron Iron Works
Continental Supply Co.
Regan Forge & Engineering Co.

Burners—
Continental Supply Co.
Gaso Pump & Burner Mfg Co.
Gould Burner Co.
Regan Forge & Engineering Co.

Bull Wheels—
Continental Supply Co.
International Derrick & Equipment Co.
Lee C. Moore & Co., Inc.
Parkersburg Rig & Reel Co.

Calf Wheels—
Continental Supply Co.
International Derrick & Equipment Co.
Lee C. Moore & Co., Inc.
Parkersburg Rig & Reel Co.

Carbon and Bortz—
R. S. Patrick

Casing—
Continental Supply Co.
Regan Forge & Engineering Co.
Republic Supply Co.
Superior Tube Company

Casing Shoes—
Baker Casing Shoe Co.
Bridgeport Machine Co.
Continental Supply Co.
The National Supply Cos.
Pelican Well Tool & Supply Co.
Regan Forge & Engineering Co.
Republic Supply Co.
W-K-M Co.

Cement Hardener—
The Sullivan Co.
W-K-M Co.

Cement Head—
MacClatchie Mfg. Co.

Chain—
Baldwin Chain Co.
Chain Belt Co.

Chain Blocks—
Yale & Towne Mfg. Co.

Charcoal Iron Boiler Tubes—
The Tyler Tube & Pipe Co.

Chemicals—
Ward Chemical Co.

Collapsible Rotary Bits—
O. M. Carter

Conservation—
Westcott and Greis

Control Heads—
Continental Supply Co.
Palmer Specialty Co.
Southern Brass Mfg. & Plating Co.

Core Drills—
O. M. Carter
Elliott Core Drilling Co.
Spengler Core Drilling Co.

Compressors—
Butler Mfg. Co.
Continental Supply Co.
Gardner Governor Co.
F. W. Heitmann Co.
Hope Engineering & Supply Co.
Sullivan Machinery Co.
United Iron Works, Inc.

Cordage—
Continental Supply Co.
The National Supply Cos.
Republic Supply Co.

Crown Blocks—
Baash-Ross Tool Co.
Continental Supply Co.
International Derrick & Equipment Co.
Lufkin Foundry & Machine Co.
Oil Well Supply Co.
Parkersburg Rig & Reel Co.
Superior Tube Co.

Couplings—
Continental Supply Co.
Harrisburg Pipe & Pipe Bending Co.
A. O. Smith Corp.
Superior Tube Company

Dehydrating Processes—
Wm. S. Barnickel Co.
Petroleum Rectifying Co.

Derricks and Rigs—
International Derrick & Equipment Co.
Lee C. Moore & Co.
National Turnbuckle Derrick Co.
Parkersburg Rig & Reel Co.
Peden Iron & Steel Co.
Robertson-McDonald Lumber Co.
Superior Tube Company

Diamond, Black—
R. S. Patrick

Diamond Core Drills—
Sullivan Machinery Co.
R. S. Patrick

Diamond Drilling Carbon—
R. S. Patrick

Disc Bits
Continental Supply Co.

Ditchers—
Barber-Greene Co.
Buckeye Traction Ditcher Co.

Draw Works—
Continental Supply Co.
Lufkin Foundry & Machine Co.

Drilling Cables—
American Cable Co.
Bridgeport Machine Co.
Continental Supply Co.
Frick-Reid Supply Co.
The National Supply Cos.
Peden Iron & Steel Co.
Regan Forge & Engineering Co.
Republic Supply Co.
Star Drilling Machine Co.
Wickwire Spencer Steel Corp.
Williamsport Wire Rope Co.

Drill Pipe Slips—
Baash-Ross Tool Co.
Continental Supply Co.

Drilling Machines—
Bridgeport Machine Co.
Continental Supply Co.
Keystone Driller Co.
Parkersburg Rig & Reel Co.
Star Drilling Machine Co.

Drill Collars—
Baash-Ross Tool Co.
Continental Supply Co.

Drill Pipe Cutting—
Baash-Ross Tool Co.
Houston Engineers, Inc.

Drilling Tools—
Acme Fishing Tool Co.
Baash-Ross Tool Co.
Continental Supply Co.

Drilling, Diamonds for—
R. S. Patrick

Drill Pipe—
Continental Supply Co.
Frick-Reid Supply Co.
Republic Supply Co.
Reading Iron Co.

Drilling Equipment—
Baash-Ross Tool Co.
Bridgeport Machine Co.
Continental Supply Co.
Republic Supply Co.
Star Drilling Machine Co.
Western Supply Co.

Drive Pipe—
Continental Supply Co.
Republic Supply Co.
Reading Iron Co.
Superior Tube Company

Electrical Equipment—
Westinghouse Elec. & Mfg. Co.

Elevators—
Bridgeport Machine Co.
Continental Supply Co.
The Cunningham Co.
Dunn Mfg. Co.
Gulf Coast Machine & Sup. Co.
LeBus Rotary Tool Works
Wilson & Willard Mfg. Co.

Engines Diesel—
Western Machinery Co.

Engines, Gas—
Bruce-Macbeth Engine Co.
Climax Engineering Co.
Continental Supply Co.
Frick-Reid Supply Co.
Hope Engineering & Supply Co.
Spence Machine Co.
The Pattin Bros. Co.
Western Machinery Co.

Engines (Gasoline or kerosene)—
Climax Engineering Co.

Engines, Oil—
Continental Supply Co.
Frick-Reid Supply Co.
The Pattin Bros. Co.
Western Machinery Co.

Engines, Pumping—
Ajax Iron Works
Bessemer Gas Engine Co.
Bridgeport Machine Co.
Climax Engineering Co.
Continental Supply Co.
The Brownell Co.
De La Vergne Machine Co.
Franklin Valveless Engine Co.
Frick-Reid Supply Co.
Hope Engineering Co.
Lucey Mfg. Corp.
Lufkin Foundry & Machine Co.
The National Supply Cos.
National Transit Pump & Machine Co.
Oil Well Supply Co.
Peden Iron & Steel Co.
Republic Supply Co.
Rock Island Plow Co.
Spence Machine Co.
Southern Engine & Pump Co.
Titusville Iron Works
Western Machinery Co.

Engineers—
David Donoghue
Foster & Reiter
Hope Engineering & Supply Co.
Lee C. Moore & Co.
Oil Conservation Engineering Co.
D. T. Ring
Westcott and Greis

Fire Protection—
Continental Supply Co.
Oil Conservation Engineering Co.

Fish Tail Bits—
Continental Supply Co.
Frick-Reid Supply Co.
Lucey Manufacturing Corp.
Pelican Well Tool & Supply Co.
Regan Forge & Engineering Co.
W-K-M Co.

Floor Circle Brace—
Continental Supply Co.
Dunn Mfg. Co.

Fuel Oil—
Gulf Refining Co.
Sinclair Refining Co.

Gasoline Extraction Compressors—
Continental Supply Co.
Bessemer Gas Engine Co.
Hope Engineering & Supply Co.
Sullivan Machinery Co.

Gauges—
Continental Supply Co.
Oil Conservation Engineering Co.
Westcott and Greis

Gas Engines—
S. M. Jones Co.

Gas Generators—
Baird Supply Co.

Gas Traps—
American Tank Co.
Continental Supply Co.
Lorraine Corp.
Smith Separator Co.
Trumble Gas Trap Co.

Gasoline and Oil Storage Tanks—
American Tank Co.
Butler Mfg. Co.
Graver Corp.
Continental Supply Co.
Kansas City Struct. Steel Co.
Parkersburg Rig & Reel Co.
Petroleum Iron Works Co., The

Genuine Wrought Iron Casing—
Reading Iron Co.

Geologists—
Joseph L. Adler
Alexander Deussen
David Donoghue
Edwin B. Hopkins
Foster & Reiter
Heath M. Robinson

Governors—
Gardner Governor Co.

Grips and Clamps—
Continental Supply Co.
J. P. Ratigan
W-K-M Co.

Heat Exchangers—
Brown Welding & Machine Co.
Hope Engineering & Supply Co.

Hoists—
Emsco Steel Products Co.

Hose—
Continental Supply Co.
Gustin Bacon Manufacturing Co.

Houses—
Crain Ready-Cut House Co.

Iron Casing—
Superior Tube Company

Laboratory Equipment—
Continental Supply Co.
Fort Worth Laboratories

Lapwelded Steel Boiler Tubes—
The Tyler Tube & Pipe Co.

Lighting Systems—
Bridgeport Machine Co.
Continental Supply Co.
Westinghouse Elec. & Mfg. Co.

Line Pipe—
Continental Supply Co.
Republic Supply Co.
Reading Iron Co.

Lumber—
Robertson-McDonald Lumber Co.

Manufacturers—
Robinson Packer Co.

Maps—
Heydrick Mapping Co.

Meters—
Continental Supply Co.
Westcott and Greis

Motors—
Twin City Co.
Westinghouse Elec. & Mfg. Co.

Oil Field Equipment—
H. Rickman

Oil Field Supplies—
American Tank Co.
Bridgeport Machine Co.
Butler Mfg. Co.
Continental Supply Co.
The Cunningham Co.
C. C. Fetty
Frick-Reid Supply Co.
Graver Corp.
Erle P. Halliburton
Jarecki Mfg. Company
International Supply Co.
Kansas City Struct. Steel Co.
Lee C. Moore & Co.
Lucey Manufacturing Corp.
The National Supply Cos.
Oil Well Supply Co.
Parkersburg Rig & Reel Co.
Peden Iron & Steel Co.
Pelican Well Tool & Supply Co.
Petroleum Iron Works Co., The
Republic Supply Co.
Regan Forge & Engineering Co.
Robinson Packer Co.
Smith Separator Co.
Southern Brass Mfg. & Plating Co.
Superior Tube Company
United Iron Works, Inc.
W-K-M Co.
J. H. Williams & Co.

Oil Well Casing—
Continental Supply Co.
Frick-Reid Supply Co.
Republic Supply Co.
Superior Tube Company

Oil Well Cementing—
Erle P. Halliburton

Oil Well Shooting—
U. S. Torpedo Co.
Zero Hour Torpedo Co.

Overshots—
Baash-Ross Tool Co.
Continental Supply Co.
LeBus Rotary Tool Works

Packers—
Continental Supply Co.
The Guiberson Corp.
Layne & Bowler
Robinson Packer Co.
Pelican Well Tool & Supply Co.
Regan Forge & Engineering Co.
W-K-M Co.

Packing—
Continental Supply Co.
D. F. Connolly Agency
Gustin Bacon Manufacturing Co.
Frick-Reid Supply Co.
The National Supply Cos.
Peden Iron & Steel Co.
Pelican Well Tool & Supply Co.
Republic Supply Co.

Paints—
Continental Supply Co.
Peden Iron & Steel Co.

Panel Boards—
Westinghouse Elec. & Mfg. Co.

Patents—
Hardway & Cathey
Jack A. Schley
Jesse R. Stone

Pipe Grips—
Continental Supply Co.
W-K-M Co.

Pipe—
A. M. Byers Co.
Continental Supply Co.
Frick-Reid Supply Co.
F. W. Heitmann Co.
Harrisburg Pipe & Pipe Bending Co.
International Supply Co.
The National Supply Cos.
Oil Well Supply Co.
Peden Iron & Steel Co.
Reading Iron Co.
Republic Supply Co.
Superior Tube Company
Williamsport Wire Rope Co.

Pipe Insulation—
Johns-Manville, Inc.

Pipe Screwing Machines—
Buckeye Traction Ditcher Co.

Pipe Threading Machines—
Jarecki Mfg. Company
Standard Engineering Co.

Pipe Vises—
J. H. Williams & Co.

Pipe Wrenches—
Continental Supply Co.
Dunn Mfg Co.
The Guiberson Corp.
Trimont Mfg. Co.
LeBus Rotary Tool Works
Republic Supply Co.
J. H. Williams & Co.
Wickwire Spencer Steel Corp.

Portable Buildings—
Butler Manufacturing Co.
International Derrick & Equipment Co.

Portable Drilling Rigs—
Bridgeport Machinery Co.
Continental Supply Co.
Lee C. Moore & Co.
Parkersburg Rig & Reel Co.
The National Supply Cos.

Pulleys—
Continental Supply Co.
International Derrick & Equipment Co.
Lee C. Moore & Co., Inc.

Pulling Machines—
Clark Machine Co.
Continental Supply Co.
Iron King Mfg. Co.
Safety Pulling Machine Co.

Pumps—
Axelson Machine Co.
Bradford Motor Works
Continental Supply Co.
D. & B. Pump & Sup. Co.
C. C. Fetty
Frick-Reid Supply Co.
Gardner Governor Co.
Gaso Pump & Burner Mfg Co.
Goulds Manufacturing Co.
Jarecki Mfg. Company
Lucey Manufacturing Corp.
National Transit Pump & Machine Co.
Oil Well Supply Co.
Pelican Well Tool & Supply Co.
Republic Supply Co.
Southern Engine & Pump Co.
Texas Oil Pump Co.
United Iron Works, Inc.

Portable Compressors—
Continental-Supply Co.
Sullivan Machinery Co.

Pumping Equipment—
Shaffer Specialty Co.

Pumping Powers—
Continental Supply Co.
C. C. Fetty
Frick-Reid Supply Co.
International Supply Co.
Jarecki Mfg. Company
Jensen Bros. Mfg. Co.
Kansas City Hay Press Co.
Spence Machine Co.

Regulators—
Westcott and Greis

Refined Products—
Gulf Refining Co.
Humble Oil & Refining Co.
Magnolia Petroleum Co.
Sinclair Refining Co.
Texas Co.

Recorders—
Fort Worth Laboratories

Refinery Equipment—
American Tank Co.
Butler Mfg. Co.
Continental Supply Co.
Graver Corp.
Oil Conservation Engineering Co.
Petroleum Iron Works Co., The
Republic Supply Co.
Smith Separator Co.
Titusville Iron Works
United Iron Works, Inc.
Westcott and Greis
Wyatt Metal & Boiler Works

Rig Irons—
Continental Supply Co.
International Supply Co.
Lee C. Moore & Co.
Oil Well Supply Co.
Parkersburg Rig & Reel Co.
Republic Supply Co.

GUIDE FOR PURCHASERS—Continued

Rod and Tubing Protectors—
H. Rickman

Rotaries—
International Supply Co.

Rotary Rock Bits—
Continental Supply Co.
Hughes Tool Co.
Reed Roller Bit Co.

Rotary Fish Tail Bits—
Continental Supply Co.
Pelican Well Tool & Supply Co.
Regan Forge & Engineering Co.
Republic Supply Co.
W-K-M Co.

Safety Casing Clamps—
Shaffer Specialty Co.

Sand Reel Supports—
Shaffer Specialty Co.

Separators—
American Tank Co.
Butler Mfg. Co.
Continental Supply Co.
Lorraine Corp.
Smith Separator Co.
Trumble Gas Trap Co.

Specialty Manufacturers—
Shaffer Specialty Co.

Structural Steel—
Butler Mfg. Co.
United Iron Works, Inc.

Steel Derricks—
Continental Supply Co.
Emsco Steel Products Co.
International Derrick & Equipment Co.
Lee C. Moore & Co., Inc.
Parkersburg Rig & Reel Co.
Superior Tube Company

Steel Crown Blocks—
Continental Supply Co.
International Derrick & Equipment Co.
Lee C. Moore & Co., Inc.
Parkersburg Rig & Reel Co.
Superior Tube Co.

Steel Storage Tanks—
American Tank Co.
Butler Mfg. Co.
Continental Supply Co.
Graver Corp.
Petroleum Iron Works Co., The

Still Covering—
Johns-Manville, Inc.

Stuffing Boxes—
A. W. Fawcett

Strainers—
Continental Supply Co.
Emsco Steel Products Co.
Layne & Bowler Co.
J. H. McEvoy & Co.
Pelican Well Tool & Supply Co.
W-K-M Co.

Special Steels—
Central Steel Co.

Sucker Rod Lines—
Continental Supply Co.

Sucker Rod Elevators—
The Cunningham Co.

Sucker Rod Hangers—
Lorraine Corp.

Sucker Rod Guides—
H. Rickman
A. H. Brandon

Sucker Rod Hooks—
The Cunningham Co.

Sucker Rod Sockets—
Baird Supply Co.
Bradford Motor Works
Brown Welding & Machine Co.
Continental Supply Co.
The Cunningham Co.
Shaffer Specialty Co.
Western Supply Co.

Sucker Rods—
Axelson Machine Co.
Continental Supply Co.
Columbus Sucker Rod Co.
D. & B. Pump & Sup. Co.
Dunn Mfg. Co.
Frick-Reid Supply Co.
S. M. Jones Co.
The National Supply Cos.
Oil Well Supply Co.
J. P. Ratigan
Republic Supply Co.

Swabs—
Continental Supply Co.
The Cunningham Co.
Shaffer Specialty Co.

Tank Bolts—
Continental Supply Co.

Tanks—
American Tank Co.
Butler Mfg. Co.
Black, Sivalls & Bryson
Continental Supply Co.
The Brownell Co.
Gants Tank Co.
Graver Corp.
Kansas City Struct. Steel Co.
Maloney Tank Co.
Parkersburg Rig & Reel Co.
Petroleum Iron Works Co., The
United Iron Works
Wyatt Metal & Boiler Works

Tank Deadwood—
Robertson-McDonald Lumber Co.

Tank Equipment—
Continental Supply Co.
Johns-Manville, Inc.
Oil Conservation Engineering Co.
Parkersburg Rig & Reel Co.
Westcott and Greis

Tank Insulation—
Johns Manville, Inc.

Tank Roofs—
Johns-Manville, Inc.

Temper Screws—
Burns Tool Co.

Thermometers—
Continental Supply Co.
Fort Worth Laboratories

Timbers—
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Wilson & Willard Mfg. Co.
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Bridgeport Machine Co.
Continental Supply Co.
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Hughes Tool Co.
Pelican Well Tool & Sup. Co.
Regan Forge & Engineering Co.
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W-K-M Co.

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Tubing—
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With the low initial cost and long service possible, this device has no equal.

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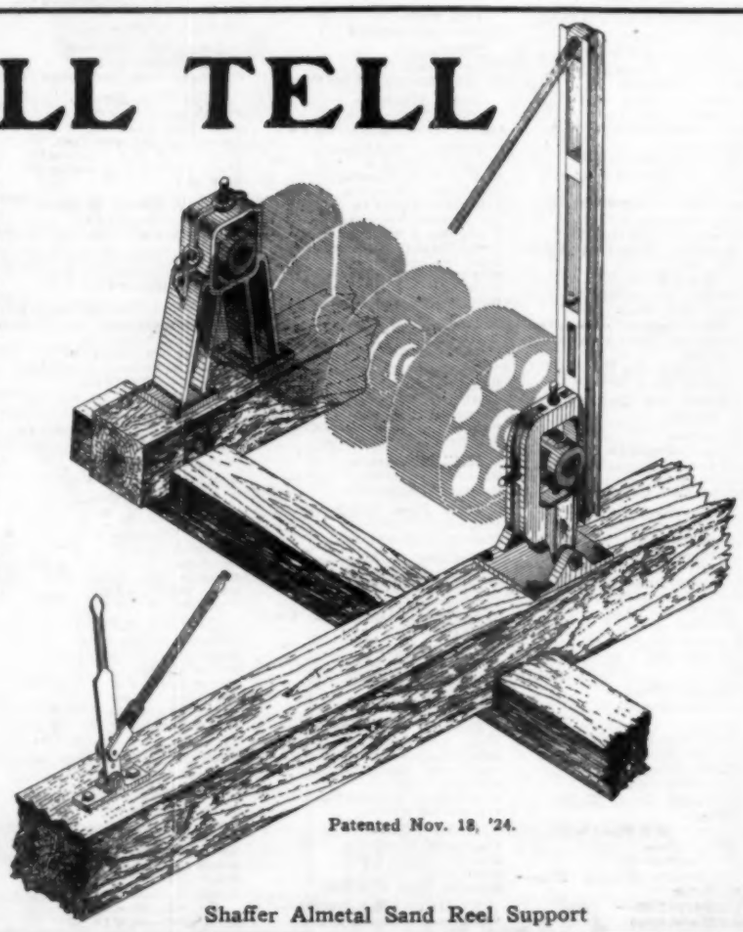

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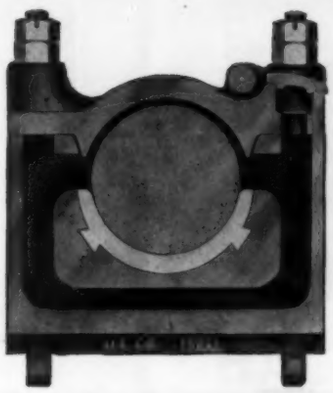
Shaffer Almetal Sand Reel Support

IDEAL

CROWN BLOCKS



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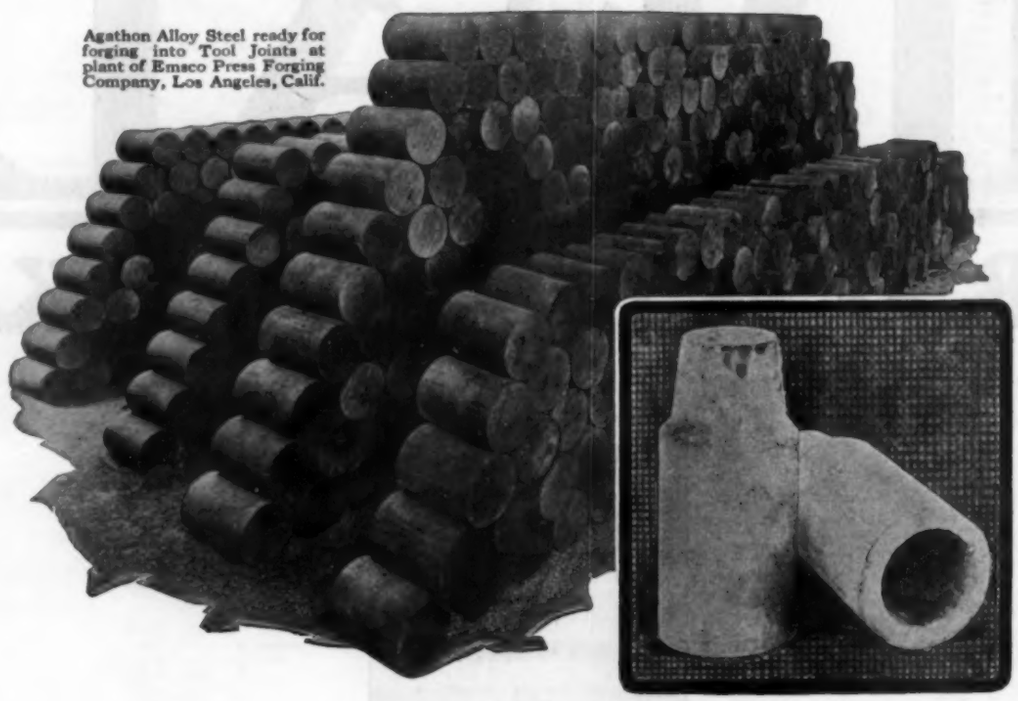

Agathon Alloy Steel ready for forging into Tool Joints at plant of Emsco Press Forging Company, Los Angeles, Calif.

And For Tool Joints, Too

A FEW years ago Agathon Alloy Steels were little known in the oil-drilling industry. Finally these tough, super-steels were adopted for drill bits. Their highly successful performance in this service has resulted in their general adoption for Tool Joints, Jars and other parts of oil-drilling equipment subjected to great wear, stress or strain. If you are not acquainted with Agathon Alloy Steels, send for our interesting booklet. If you have a steel problem, our metallurgists will help you solve it free of charge. Write us.

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AGATHON ALLOY STEELS

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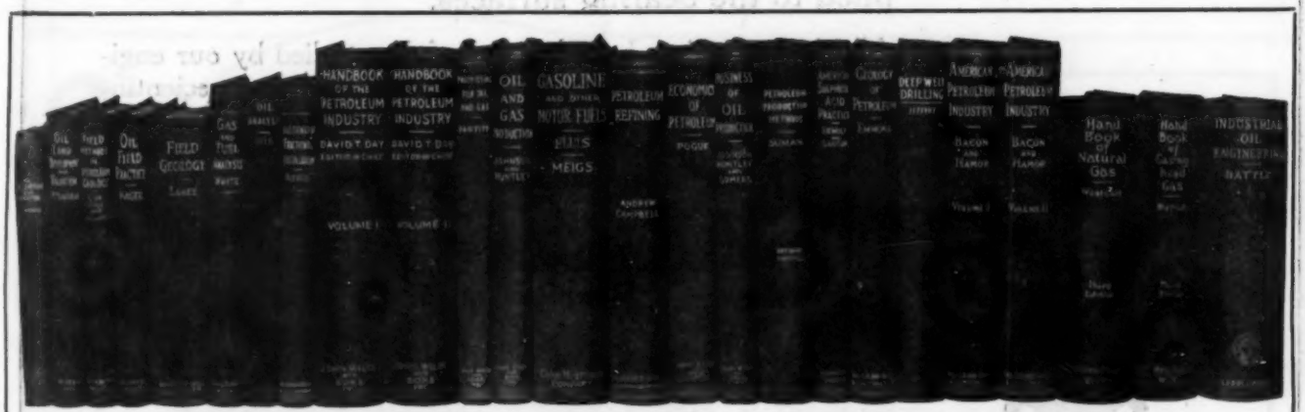

The hope of the world is in keeping the spark of ambition alive and burning in every human being. When men cease to improve themselves and their conditions, society is in danger.—Axiom

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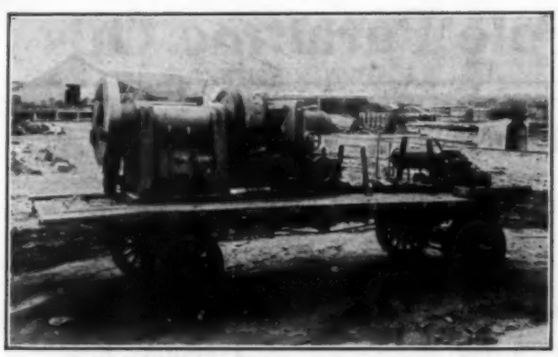
Standard pipe cutters and threaders

WIELAND



One of a number of Standard Pipe Threaders in use in the Texas fields. Photograph shows installation of Texas Pacific Coal & Oil Co., Thurker, Texas

The rough and ready characteristics of the STANDARD Pipe Threader and its undeniable ability to "deliver the goods" under the most exacting conditions, qualifies it for the most strenuous oil field work.

Deeper and sharper threads, more cleanly cut than is possible with an ordinary pipe threader, are assured by the STANDARD. Its economical operation and lack of complicated parts makes the STANDARD a prime favorite with the practical oil field operator wherever it is in use.

The story of the STANDARD WIELAND will be found in the STANDARD Bulletins.

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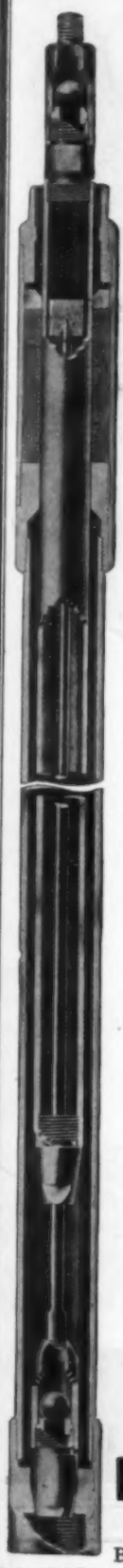

Garbutt Rod Type

HOW?

For some people a dollar has 200 cents, for some 100 cents, for others 50 cents and for others even less.

In the oil production business the man who uses a working barrel that automatically packs itself, that rarely has to be pulled, that does not cut oil—even in the worst wells—that man is making a dollar of a maximum number of cents. When the

"Tex"

Working Barrel was first put on the market after having been very carefully tested, it was difficult to make oil men believe that here, at last, is a working barrel that can be placed at the bottom of the well, can be left there, and can be depended upon to work satisfactorily without the enormous expense of frequent pulling and delays.

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Bradford, Pa.

Branch Factory & Warehouse, Tulsa, Okla.

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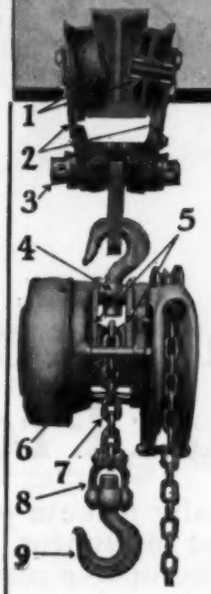

For GREATER SERVICE

The Yale *Ball Bearing* Spur-Geared Chain Block lifts more easily, with a lighter hand-chain pull, because friction has been reduced where friction *was* greatest.

It gives greater service because the wear on load-sheave bearings has been greatly lessened by the Yale smooth-rolling chrome-vanadium steel ball bearings.

The Yale Block is more efficient because less muscular energy is required to lift the load.

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Yale Ball Bearing Spur-Geared Blocks with Yale Roller Bearing Trolleys insure low-cost service and the highest degree of safety.

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—a line of steel from hook to hook.

The Yale & Towne Mfg. Co.

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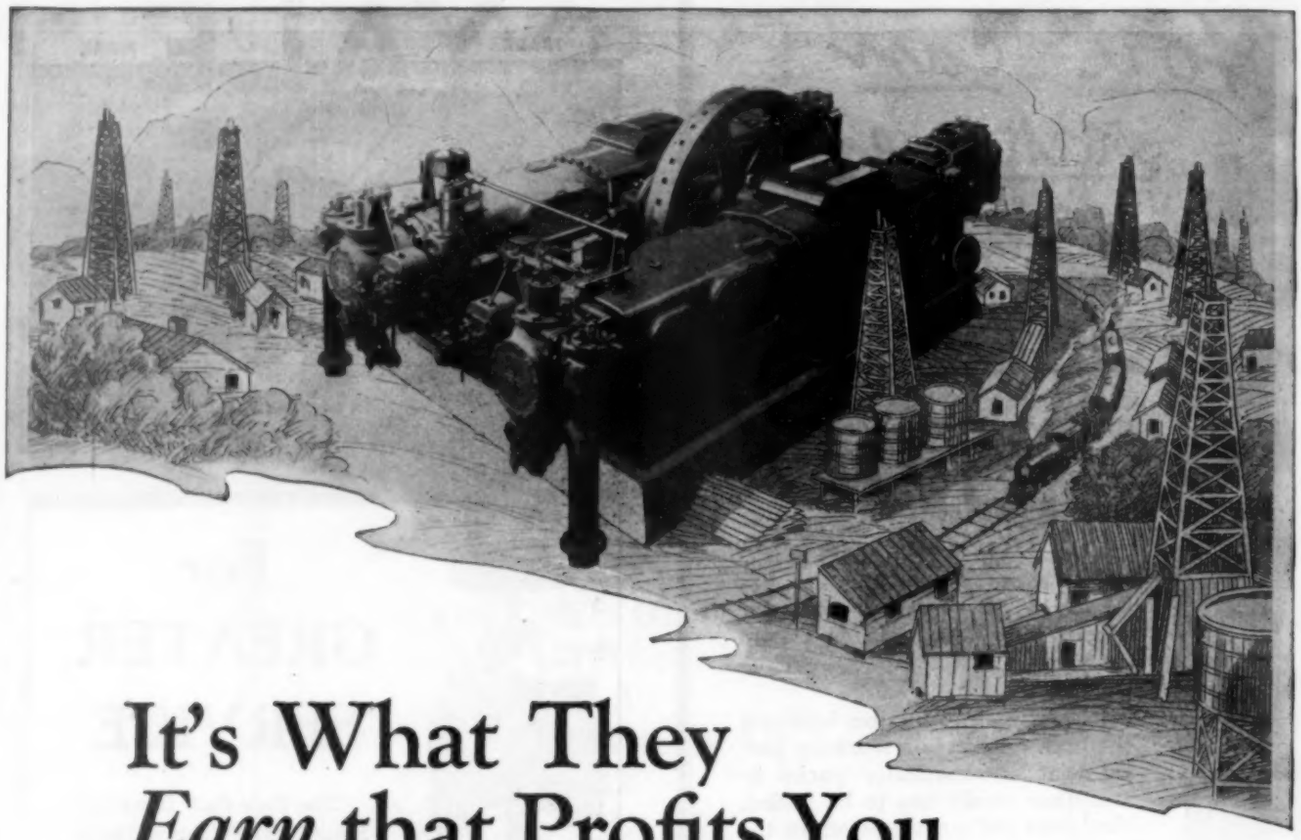
YALE Hoisting and Conveying Systems



It's What They *Earn* that Profits You

BESSEMERS actually make a profit on your oil field power equipment investment. More running hours for more years with less upkeep cost build added profits for Bessemer users. Their savings are positive and tangible whether on a single small Oil Field Engine or a large installation of big Compressors.

Each Bessemer product has been designed and built to meet every conceivable operating condition in the field. In Bessemers the Oil Industry has a complete range of oil field equipment—Gas Engines, Oil Engines (2 and 4 cycle), Compressors and Vacuum Pumps (2 and 4 cycle, direct and belt driven) and Roller Pumping Powers—each unit of which is built to serve you at a profit.

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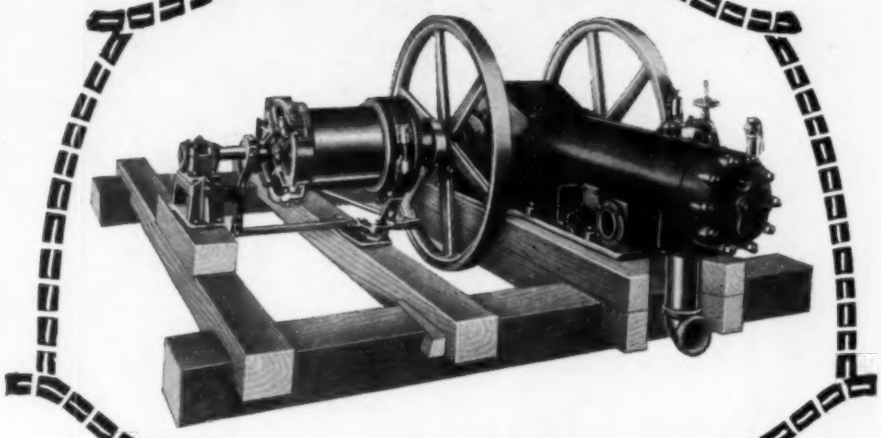
VALVELESS ENGINES



Although there are many drilling engines on the market many of them ignore one of the fundamentals of good engine construction—CROSSHEAD.

The Franklin is of the enclosed type with all parts easily accessible. It is a horizontal, single cylinder, two cycle, three port VALVELESS engine fitted with a CROSSHEAD.

The use of a CROSSHEAD relieves the piston of all side thrust, due to the angularity of the connecting rod. It permits the use of the best known system of lubrication, and adds greatly to the life of the engine. Ask for complete information, stating why the crosshead construction is superior.

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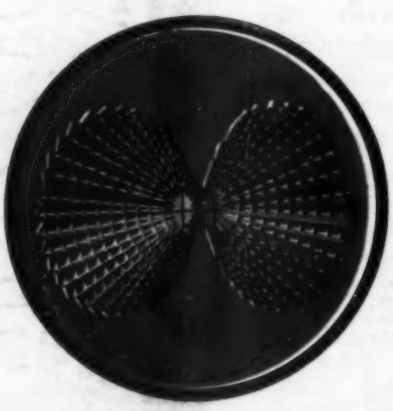
HUGHES SIMPLEX Rock Bits

CRUSH and CHIP

their way through hardest formations at maximum speed



Hughes Cones have hundreds of hardened steel teeth. The cones roll in a true circle, the teeth chipping and crushing through any rock formation.

Manufactured from selected wear-resisting steel, scientifically heat treated, Hughes Cones make a maximum footage before changing cones is necessary.

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